

Exam: Semester Exam

Question 1a of 57 (2 Conic Sections 329626)**Maximum Attempts:** 1**Question Type:** Multiple Choice**Maximum Score:** 5**Question:** Which type of conic section is given by the following equation?

$$\frac{(x-2)^2}{2^2} - \frac{(y+1)^2}{5^2} = 1$$

	Choice	Feedback
A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
*E.	Hyperbola opening left and right	
F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Hyperbola opening left and right.

Question 1b of 57 (2 Conic Sections 329662)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(x-3)^2}{3^2} - \frac{(y+2)^2}{6^2} = 1$$

	Choice	Feedback
A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
*E.	Hyperbola opening left and right	
F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Hyperbola opening left and right.

Question 1c of 57 (2 Conic Sections 329668)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(x-4)^2}{4^2} - \frac{(y+3)^2}{7^2} = 1$$

	Choice	Feedback
A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
E.	Hyperbola opening up and down	
*F.	Hyperbola opening left and right	

Global Incorrect Feedback

The correct answer is: Hyperbola opening left and right.

Question 2a of 57 (2 Conic Sections 329671)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(y-2)^2}{3^2} - \frac{(x+1)^2}{5^2} = 1$$

	Choice	Feedback
A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
E.	Hyperbola opening left and right	
*F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Hyperbola opening up and down.

Question 2b of 57 (2 Conic Sections 329673)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(y-3)^2}{4^2} - \frac{(x+2)^2}{6^2} = 1$$

	Choice	Feedback
A.	Ellipse	
B.	Circle	
C.	Square	
*D.	Hyperbola opening up and down	
E.	Hyperbola opening left and right	
F.	Parabola that opens up	

Global Incorrect Feedback

The correct answer is: Hyperbola opening up and down.

Question 2c of 57 (2 Conic Sections 329674)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(y-4)^2}{5^2} - \frac{(x+2)^2}{7^2} = 1$$

	Choice	Feedback
*A.	Hyperbola opening up and down	

B.	Hyperbola opening left and right	
C.	Square	
D.	Parabola that opens up	
E.	Circle	
F.	Ellipse	

Global Incorrect Feedback

The correct answer is: Hyperbola opening up and down.

Question 3a of 57 (2 Conic Sections 91584)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following could correctly describe the graph of the equation below? Check all that apply.

$$(x - 2)^2 + (y + 1)^2 = 16$$

Correct Answers:

	Choice
*A.	Ellipse
*B.	Circle
C.	Square

D.	Parabola that opens up
E.	Hyperbola opening left and right
F.	Hyperbola opening up and down

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: Ellipse and Circle.

Question 3b of 57 (2 Conic Sections 310500)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following could correctly describe the graph of the equation below? Check all that apply.

$$(x - 3)^2 + (y + 2)^2 = 25$$

Correct Answers:

Choice

*A.	Ellipse
*B.	Circle
C.	Square
D.	Parabola that opens up
E.	Hyperbola opening left and right
F.	Hyperbola opening up and down

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: Ellipse and Circle.

Question 3c of 57 (2 Conic Sections 310501)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following could correctly describe the graph of the equation below? Check all that apply.

$$(x - 4)^2 + (y + 3)^2 = 36$$

Correct Answers:

	Choice
*A.	Ellipse
*B.	Circle
C.	Square
D.	Parabola that opens up
E.	Hyperbola opening left and right
F.	Hyperbola opening up and down

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: Ellipse and Circle.

Question 4a of 57 (2 Conic Sections 329675)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(x-2)^2}{3^2} + \frac{(y+1)^2}{5^2} = 1$$

	Choice	Feedback
*A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
E.	Hyperbola opening left and right	
F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Ellipse.

Question 4b of 57 (2 Conic Sections 329677)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(x-3)^2}{4^2} + \frac{(y+2)^2}{6^2} = 1$$

	Choice	Feedback
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*A.	Ellipse	
B.	Circle	
C.	Square	
D.	Parabola that opens up	
E.	Hyperbola opening left and right	
F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Ellipse.

Question 4c of 57 (2 Conic Sections 329679)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which type of conic section is given by the following equation?

$$\frac{(x-4)^2}{5^2} + \frac{(y+3)^2}{7^2} = 1$$

	Choice	Feedback
*A.	Ellipse	
B.	Circle	
C.	Square	

D.	Parabola that opens up	
E.	Hyperbola opening left and right	
F.	Hyperbola opening up and down	

Global Incorrect Feedback

The correct answer is: Ellipse.

Question 5a of 57 (2 Conic Sections 142635)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 3

Question: What is the x-coordinate of the center of the ellipse with the following equation?

$$\frac{(y + 4)^2}{9} + \frac{(x - 3)^2}{18} = 6$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 3.

Question 5b of 57 (2 Conic Sections 310504)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 4

Question: What is the x-coordinate of the center of the ellipse with the following equation?

$$\frac{(y+5)^2}{25} + \frac{(x-4)^2}{9} = 6$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 4.

Question 5c of 57 (2 Conic Sections 310505)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 5

Question:

What is the x-coordinate of the center of the ellipse with the following equation?

$$\frac{(y+6)^2}{18} + \frac{(x-5)^2}{4} = 5$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 5.

Question 6a of 57 (2 Conic Sections 142637)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 5

Question: What is the y-coordinate of the vertex of a parabola with the following equation?

$$y = x^2 - 6x + 14$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 5.

Question 6b of 57 (2 Conic Sections 310506)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 8

Question: What is the y-coordinate of the vertex of a parabola with the following equation?

$$y = x^2 - 4x + 12$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 8.

Question 6c of 57 (2 Conic Sections 310507)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 2

Question: What is the y-coordinate of the vertex of a parabola with the following equation?

$$y = x^2 - 8x + 18$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 2.

Question 7a of 57 (2 Conic Sections 142638)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: -2

Question: If the equation of a parabola is $y = 7(x - 4)^2 + h$, and its vertex is (4, -2), what is the value of h in the equation?

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: -2.

Question 7b of 57 (2 Conic Sections 310508)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: -3

Question: If the equation of a parabola is $y = 8(x - 3)^2 + h$, and its vertex is (3, -3), what is the value of h in the equation?

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: -3.

Question 7c of 57 (2 Conic Sections 310509)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: -4

Question:

If the equation of a parabola is $y = 9(x - 2)^2 + h$, and its vertex is (2, -4), what is the value of h in the equation?

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: -4.

Question 8a of 57 (2 Conic Sections 142640)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 8

Question:

If the function $G(x) = (x - 8)^2 + 6$ has the same shape as $F(x) = x^2 + 6$, how far to the right of $F(x)$ is $G(x)$ shifted?

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: 8.

Question 8b of 57 (2 Conic Sections 310510)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 9

Question: If the function $G(x) = (x - 9)^2 + 6$ has the same shape as $F(x) = x^2 + 6$, how far to the right of $F(x)$ is $G(x)$ shifted?

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 9.

Question 8c of 57 (2 Conic Sections 310511)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 7

Question: If the function $G(x) = (x - 7)^2 + 3$ has the same shape as $F(x) = x^2 + 3$, how far to the right of $F(x)$ is $G(x)$ shifted?

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: 7.

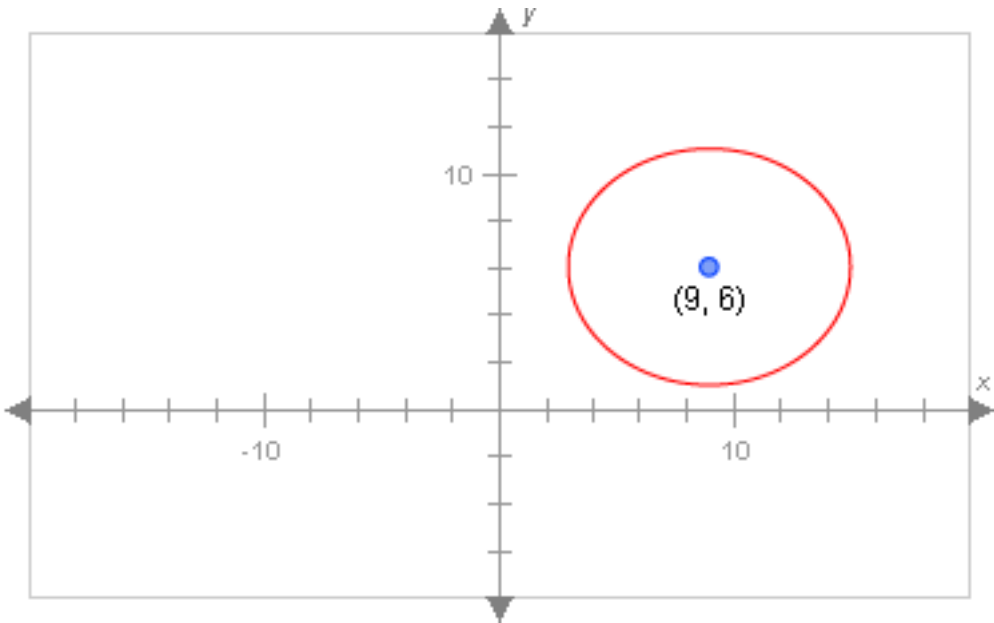
Question 9a of 57 (2 Conic Sections 91590)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
*A.	$\frac{(x-9)^2}{6^2} + \frac{(y-6)^2}{5^2} = 1$	
B.	$\frac{(x-6)^2}{6^2} + \frac{(y-9)^2}{5^2} = 1$	
C.	$\frac{(x-9)^2}{12^2} + \frac{(y-6)^2}{10^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-9)^2}{6^2} + \frac{(y-6)^2}{5^2} = 1$.

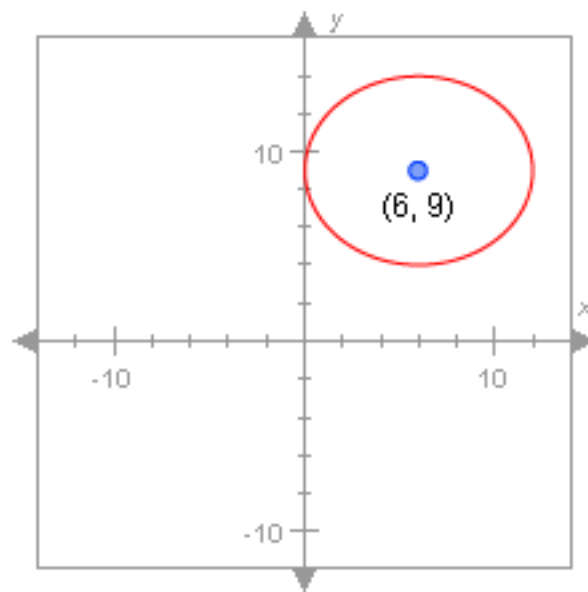
Question 9b of 57 (2 Conic Sections 310512)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x-9)^2}{6^2} + \frac{(y-6)^2}{5^2} = 1$	
*B.	$\frac{(x-6)^2}{6^2} + \frac{(y-9)^2}{5^2} = 1$	
C.	$\frac{(x-9)^2}{12^2} + \frac{(y-6)^2}{10^2} = 1$	

Global Incorrect Feedback
<p>The correct answer is: $\frac{(x-6)^2}{6^2} + \frac{(y-9)^2}{5^2} = 1$.</p>

Question 9c of 57 (2 Conic Sections 310513)

Maximum Attempts: 1

Question Type:

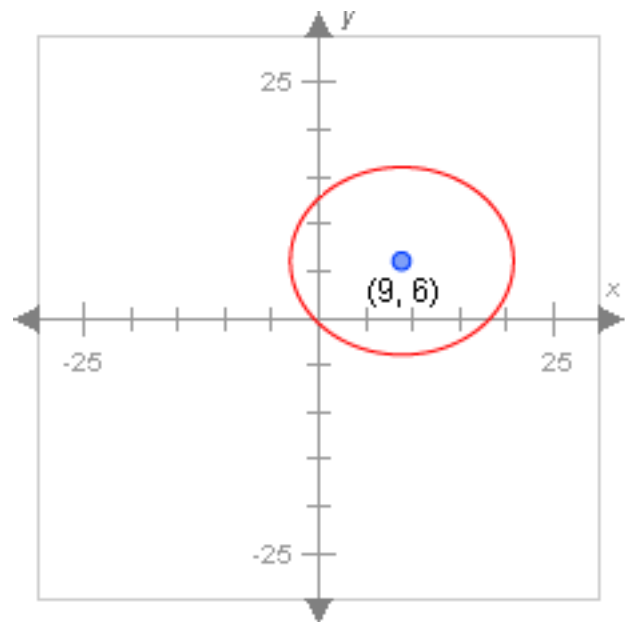
Maximum Score:

Question:

Multiple Choice

5

Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x-9)^2}{6^2} + \frac{(y-6)^2}{5^2} = 1$	
B.	$\frac{(x-6)^2}{6^2} + \frac{(y-9)^2}{5^2} = 1$	
*C.	$\frac{(x-9)^2}{12^2} + \frac{(y-6)^2}{10^2} = 1$	

Global Incorrect Feedback

The correct answer is:

$\frac{(x-9)^2}{12^2} + \frac{(y-6)^2}{10^2} = 1$

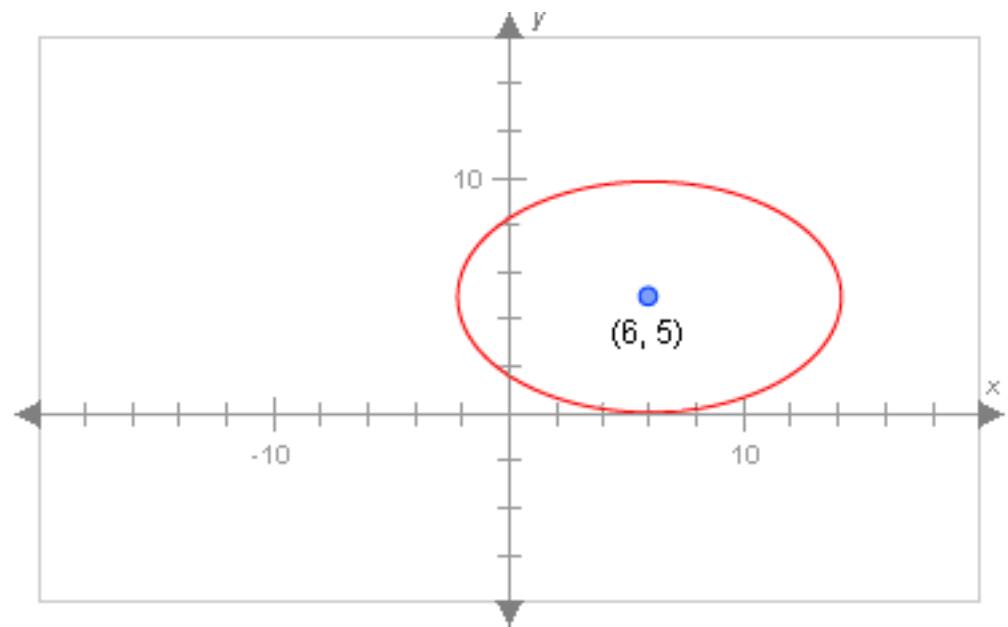
Question 10a of 57 (2 Conic Sections 91591)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

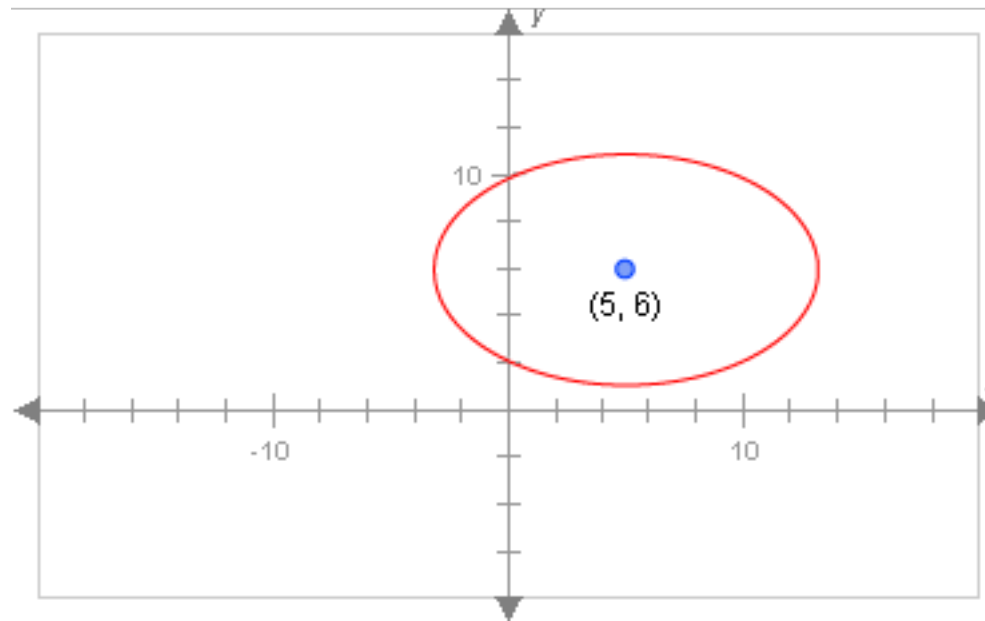
Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x - 5)^2}{8^2} + \frac{(y - 6)^2}{5^2} = 1$	
*B.	$\frac{(x - 6)^2}{8^2} + \frac{(y - 5)^2}{5^2} = 1$	
C.	$\frac{(x - 5)^2}{16^2} + \frac{(y - 6)^2}{6^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-6)^2}{8^2} + \frac{(y-5)^2}{5^2} = 1$.

Question 10b of 57 (2 Conic Sections 310514)**Maximum Attempts:** 1**Question Type:** Multiple Choice**Maximum Score:** 5**Question:** Which of the following equations could be that of the ellipse graphed below?

	Choice	Feedback
*A.	$\frac{(x-5)^2}{8^2} + \frac{(y-6)^2}{5^2} = 1$	

B.	$\frac{(x-6)^2}{8^2} + \frac{(y-5)^2}{5^2} = 1$	
C.	$\frac{(x-5)^2}{16^2} + \frac{(y-6)^2}{6^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-5)^2}{8^2} + \frac{(y-6)^2}{5^2} = 1$.

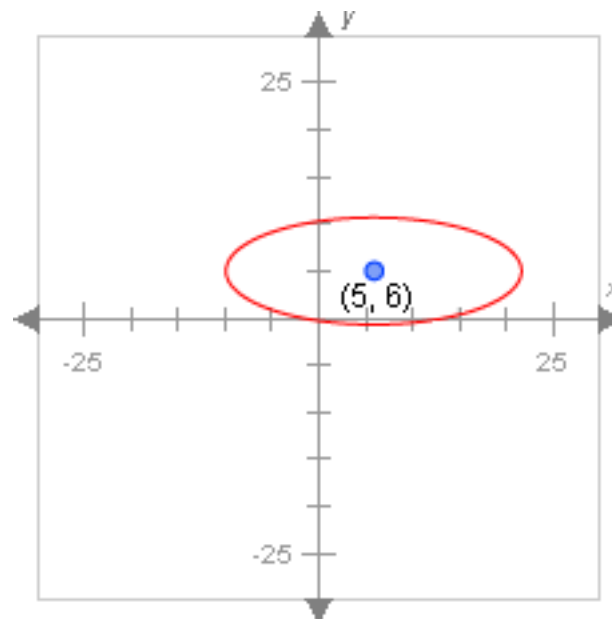
Question 10c of 57 (2 Conic Sections 310515)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x-5)^2}{8^2} + \frac{(y-6)^2}{5^2} = 1$	
B.	$\frac{(x-6)^2}{8^2} + \frac{(y-5)^2}{5^2} = 1$	
*C.	$\frac{(x-5)^2}{16^2} + \frac{(y-6)^2}{6^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-5)^2}{16^2} + \frac{(y-6)^2}{6^2} = 1$.

Question 11a of 57 (1 Polynomial Functions 158132)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: What terms are missing from this polynomial? Check all that apply.

$$5x^4 - 3x^2 + x$$

Correct Answers:

	Choice
A.	x^4 -term
*B.	x^3 -term
C.	x -term

***D.** A constant term

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: x^3 -term and A constant term.

Question 11b of 57 (1 Polynomial Functions 310516)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: What terms are missing from this polynomial? Check all that apply.

$$6x^5 - 3x^3 + 2x + 1$$

Correct Answers:

	Choice
*A.	x^4 -term
B.	x^3 -term
*C.	x^2 -term
D.	A constant term

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: x^4 -term and x^2 -term.

Question 11c of 57 (1 Polynomial Functions 310517)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: What terms are missing from this polynomial? Check all that apply.

$$7x^6 + 5x^5 + 3x^4 + x - 5$$

Correct Answers:

	Choice
*A.	x^3 -term
*B.	x^2 -term
C.	x -term
D.	A constant term

Attempt	Incorrect Feedback
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1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answers are: x^3 -term and x^2 -term.

Question 12a of 57 (2 Graphing Polynomial Functions 158133)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following correctly describes the end behavior of the function below?

$$F(x) = 3x^4 - 5$$

	Choice	Feedback
*A.	The graph of the function starts high and ends high.	
B.	The graph of the function starts low and ends high.	
C.	The graph of the function starts high and ends low.	
D.	The graph of the function starts low and ends low.	

Global Incorrect Feedback

The correct answer is: The graph of the function starts high and ends high.

Question 12b of 57 (2 Graphing Polynomial Functions 310518)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following correctly describes the end behavior of the function below?

$$F(x) = -3x^4 - 5$$

	Choice	Feedback
A.	The graph of the function starts high and ends high.	
B.	The graph of the function starts low and ends high.	
C.	The graph of the function starts high and ends low.	
*D.	The graph of the function starts low and ends low.	

Global Incorrect Feedback

The correct answer is: The graph of the function starts low and ends low.

Question 12c of 57 (2 Graphing Polynomial Functions 310519)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following correctly describes the end behavior of the function below?

$$F(x) = -4x^3 + 2$$

	Choice	Feedback
A.	The graph of the function starts high and ends high.	
B.	The graph of the function starts low and ends high.	
*C.	The graph of the function starts high and ends low.	
D.	The graph of the function starts low and ends low.	

Global Incorrect Feedback
The correct answer is: The graph of the function starts high and ends low.

Question 13a of 57 (3 Factoring Polynomials 158136)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $5(x + 3)(x - 5)$, $(x + 3)5(x - 5)$, $(x + 3)(x - 5)5$, $5(x - 5)(x + 3)$, $(x - 5)5(x + 3)$, $(x - 5)(x + 3)5$, $5(3 + x)(x - 5)$, $(3 + x)5(x - 5)$, $(3 + x)(x - 5)5$, $5(x - 5)(3 + x)$, $(x - 5)5(3 + x)$, $(x - 5)(3 + x)5$

Question: Factor the trinomial below. Enter each factor as a polynomial in descending order.

$5x^2 - 10x - 75$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $5(x + 3)(x - 5)$.

Question 13b of 57 (3 Factoring Polynomials 310520)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $6(x + 2)(x - 6)$, $(x + 2)6(x - 6)$, $(x + 2)(x - 6)6$, $6(x - 6)(x + 2)$, $(x - 6)6(x + 2)$, $(x - 6)(x + 2)6$, $6(2 + x)(x - 6)$, $(2 + x)6(x - 6)$, $(2 + x)(x - 6)6$, $6(x - 6)(2 + x)$, $(x - 6)6(2 + x)$, $(x - 6)(2 + x)6$

Question: Factor the trinomial below. Enter each factor as a polynomial in descending order.

$6x^2 - 24x - 72$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $6(x + 2)(x - 6)$.

Question 13c of 57 (3 Factoring Polynomials 310521)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $7(x + 1)(x - 7)$, $(x + 1)7(x - 7)$, $(x + 1)(x - 7)7$, $7(x - 7)(x + 1)$, $(x - 7)7(x + 1)$, $(x - 7)(x + 1)7$, $7(1 + x)(x - 7)$, $(1 + x)7(x - 7)$, $(1 + x)(x - 7)7$, $7(x - 7)(1 + x)$, $(x - 7)7(1 + x)$, $(x - 7)(1 + x)7$

Question: Factor the trinomial below. Enter each factor as a polynomial in descending order.

$$7x^2 - 42x - 49$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $7(x + 1)(x - 7)$.

Question 14a of 57 (3 Finding Solutions to Polynomials 158216)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 5
Correct Answer: 0
Question: How many real solutions are there to the equation shown below?

$$x^2 + 3x + 5 = 0$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 0.

Question 14b of 57 (3 Finding Solutions to Polynomials 310523)

Maximum Attempts: 1
Question Type: Numeric Fill In Blank
Maximum Score: 5
Correct Answer: 0
Question: How many real solutions are there to the equation shown below?

$$x^2 + 2x + 6 = 0$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: 0.

Question 14c of 57 (3 Finding Solutions to Polynomials 310525)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 0

Question: How many real solutions are there to the equation shown below?

$$x^2 + 3x + 10 = 0$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 0.

Question 15a of 57 (3 Operations on Complex Numbers 158225)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $2 + 10i$, $(2 + 10i)$, $10i + 2$, $(10i + 2)$
Question: Subtract the complex numbers.

$$(7 + 4i) - (5 - 6i)$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $2 + 10i$.

Question 15b of 57 (3 Operations on Complex Numbers 310526)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $3 + 11i$, $(3 + 11i)$, $11i + 3$, $(11i + 3)$
Question: Subtract the complex numbers.

$$(8 + 5i) - (5 - 6i)$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $3 + 11i$.

Question 15c of 57 (3 Operations on Complex Numbers 310527)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $4 + 12i$, $(4 + 12i)$, $12i + 4$, $(12i + 4)$
Question: Subtract the complex numbers.

$$(9 + 4i) - (5 - 8i)$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $4 + 12i$.

Question 16a of 57 (3 Operations on Complex Numbers 158226)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(-7 + 22i)/13$, $-7/13 + 22i/13$, $(-7/13)+(22i/13)$, $22i/13 - 7/13$, $(22i/13)-(7/13)$, $(22i - 7)/13$, $(22i - 7)/(13)$

Question: Divide the complex numbers.

$$\frac{4 + 5i}{2 - 3i}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(-7 + 22i)/13$.

Question 16b of 57 (3 Operations on Complex Numbers 310528)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(7 + 22i)/13$, $7/13 + 22i/13$, $(7/13)+(22i/13)$, $22i/13 + 7/13$, $(22i/13)+(7/13)$, $(22i + 7)/13$

Question: Divide the complex numbers.

$$\frac{5 + 4i}{3 - 2i}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(7 + 22i)/13$.

Question 16c of 57 (3 Operations on Complex Numbers 310529)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(-2 + 23i)/13$, $-2/13 + 23i/13$, $(-2/13)+(23i/13)$, $23i/13 - 2/13$, $(23i/13)-(2/13)$, $(23i - 2)/13$

Question: Divide the complex numbers.

$$\frac{5 + 4i}{2 - 3i}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $(-2 + 23i)/13$.

Question 17a of 57 (3 Evaluating Polynomials 158228)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 76

Question: Given the polynomial $F(x) = 5x^4 - 3x + 2$, find $F(2)$.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 76.

Question 17b of 57 (3 Evaluating Polynomials 310530)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 239

Question: Given the polynomial $F(x) = 3x^4 - 2x + 2$, find $F(3)$.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: 239.

Question 17c of 57 (3 Evaluating Polynomials 310531)

Maximum Attempts: 1

Question Type: Numeric Fill In Blank

Maximum Score: 5

Correct Answer: 45

Question: Given the polynomial $F(x) = 3x^4 - 3x + 3$, find $F(2)$.

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback

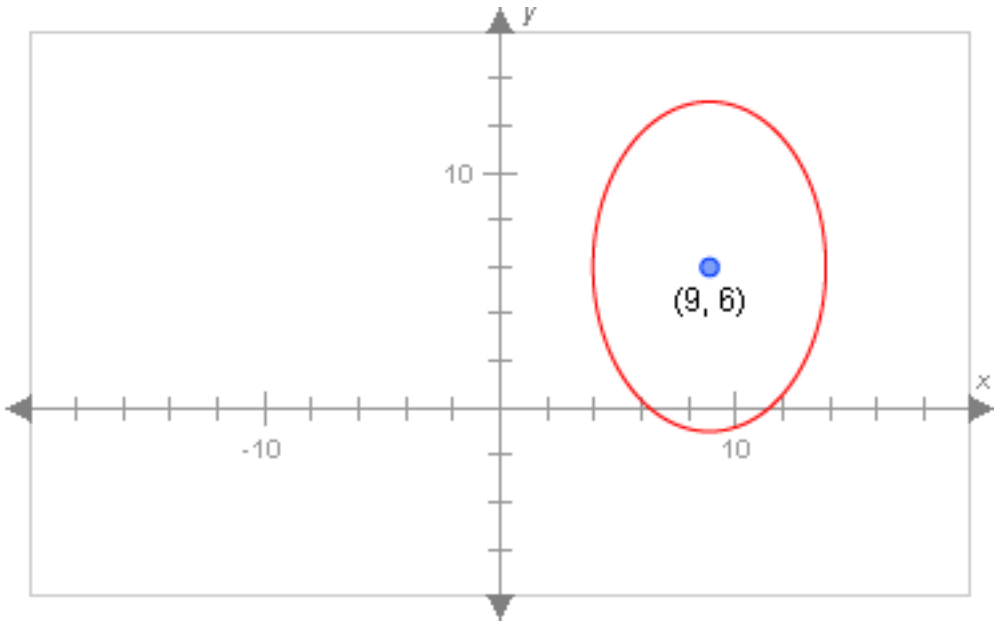
Question 18a of 57 (2 Conic Sections 91592)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x-9)^2}{10^2} + \frac{(y-6)^2}{14^2} = 1$	
B.	$\frac{(x-6)^2}{7^2} + \frac{(y-9)^2}{5^2} = 1$	

*C.	$\frac{(x-9)^2}{5^2} + \frac{(y-6)^2}{7^2} = 1$
-----	---

Global Incorrect Feedback
The correct answer is: $\frac{(x-9)^2}{5^2} + \frac{(y-6)^2}{7^2} = 1$.

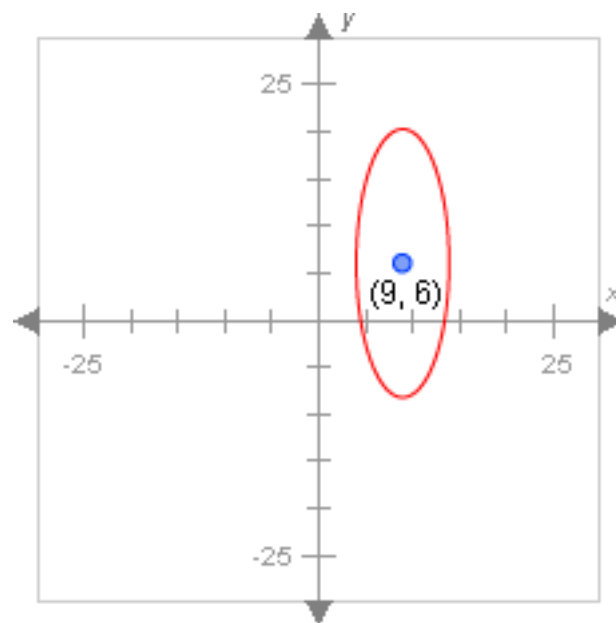
Question 18b of 57 (2 Conic Sections 310532)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
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*A.	$\frac{(x-9)^2}{10^2} + \frac{(y-6)^2}{14^2} = 1$	
B.	$\frac{(x-6)^2}{7^2} + \frac{(y-9)^2}{5^2} = 1$	
C.	$\frac{(x-9)^2}{5^2} + \frac{(y-6)^2}{7^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-9)^2}{10^2} + \frac{(y-6)^2}{14^2} = 1$.

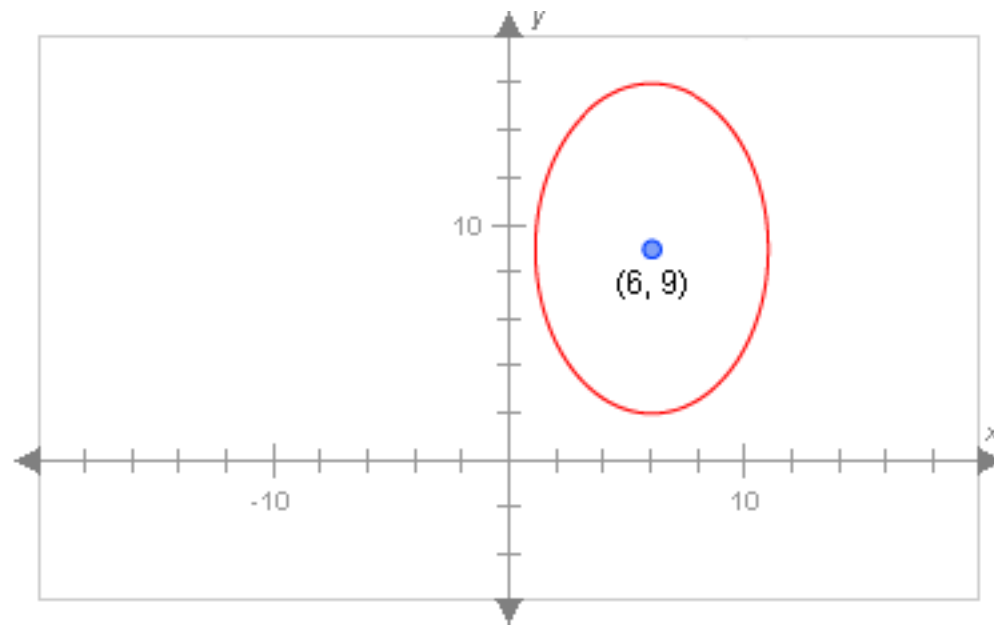
Question 18c of 57 (2 Conic Sections 310533)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the ellipse graphed below?



	Choice	Feedback
A.	$\frac{(x-9)^2}{10^2} + \frac{(y-6)^2}{14^2} = 1$	
*B.	$\frac{(x-6)^2}{5^2} + \frac{(y-9)^2}{7^2} = 1$	
C.	$\frac{(x-9)^2}{5^2} + \frac{(y-6)^2}{7^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x-6)^2}{5^2} + \frac{(y-9)^2}{7^2} = 1$.

Question 19a of 57 (2 Conic Sections 91593)

Maximum Attempts: 1

Question Type:

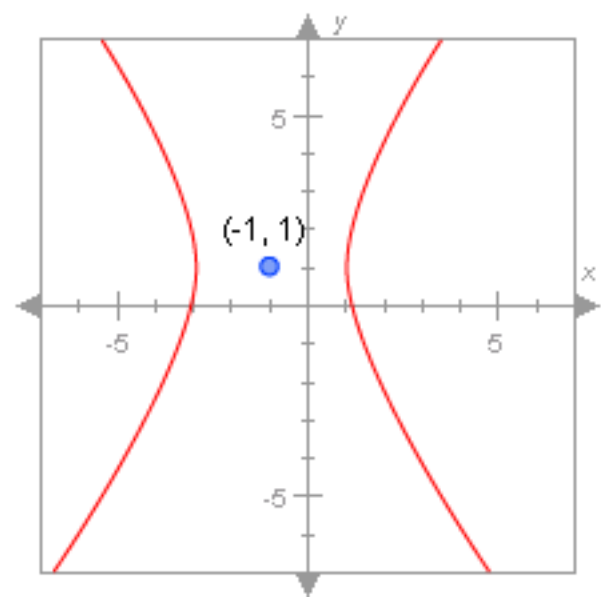
Maximum Score:

Question:

Multiple Choice

5

Which of the following equations could be that of the hyperbola graphed below?



	Choice	Feedback
A.	$\frac{(y-1)^2}{6^2} - \frac{(x+1)^2}{5^2} = 1$	
B.	$\frac{(x-1)^2}{6^2} - \frac{(y+1)^2}{5^2} = 1$	
*C.	$\frac{(x+1)^2}{2^2} - \frac{(y-1)^2}{3^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x+1)^2}{2^2} - \frac{(y-1)^2}{3^2} = 1$.

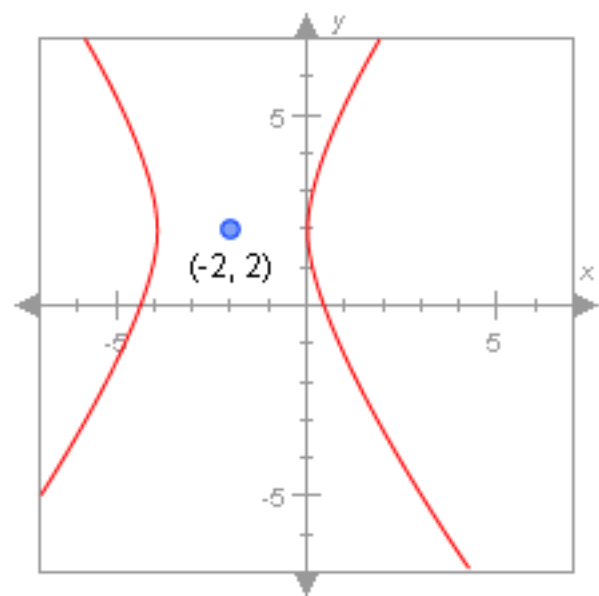
Question 19b of 57 (2 Conic Sections 310534)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the hyperbola graphed below?



	Choice	Feedback
A.	$\frac{(y - 2)^2}{6^2} - \frac{(x + 2)^2}{5^2} = 1$	
B.	$\frac{(x - 2)^2}{6^2} - \frac{(y + 2)^2}{5^2} = 1$	
*C.	$\frac{(x + 2)^2}{2^2} - \frac{(y - 2)^2}{3^2} = 1$	

Global Incorrect Feedback

The correct answer is: $\frac{(x+2)^2}{2^2} - \frac{(y-2)^2}{3^2} = 1$.

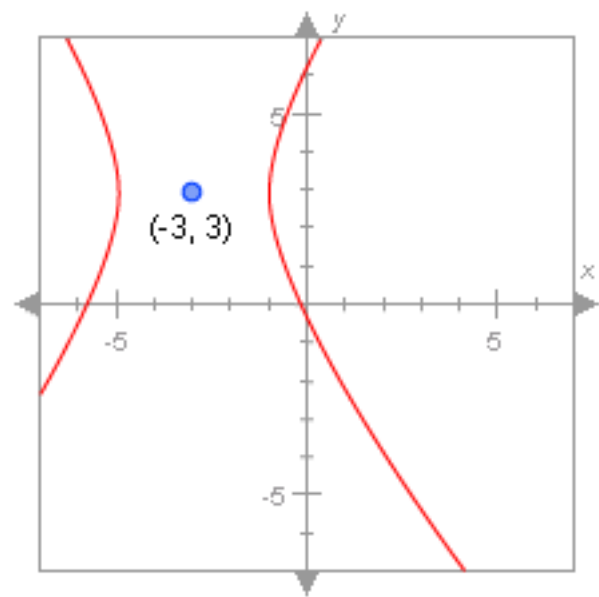
Question 19c of 57 (2 Conic Sections 310535)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following equations could be that of the hyperbola graphed below?



	Choice	Feedback
*A.	$\frac{(x+3)^2}{2^2} - \frac{(y-3)^2}{3^2} = 1$	
B.	$\frac{(y-3)^2}{6^2} - \frac{(x+3)^2}{5^2} = 1$	

c.	$\frac{(x-3)^2}{6^2} - \frac{(y+3)^2}{5^2} = 1$
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Global Incorrect Feedback

The correct answer is: $\frac{(x+3)^2}{2^2} - \frac{(y-3)^2}{3^2} = 1$.

Question 20a of 57 (2 Domain of Composite Functions 91594)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{x}$$

$$G(y) = \frac{1}{y} - 2$$

$$G(F(x)) = \frac{1}{\sqrt{x}} - 2$$

	Choice	Feedback
A.	$x < 0$	
B.	$x \leq 2$	
C.	$x \geq 0$	
*D.	$x > 0$	
E.	$x < 2$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x > 0$.

Question 20b of 57 (2 Domain of Composite Functions 310536)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{x}$$

$$G(y) = \frac{1}{y} - 3$$

$$G(F(x)) = \frac{1}{\sqrt{x}} - 3$$

	Choice	Feedback
A.	$x < 0$	
B.	$x \leq 3$	
C.	$x \geq 0$	
*D.	$x > 0$	
E.	$x < 3$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x > 0$.

Question 20c of 57 (2 Domain of Composite Functions 310537)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$F(x) = \sqrt{x}$

$G(y) = \frac{1}{y} - 4$

$G(F(x)) = \frac{1}{\sqrt{x}} - 4$

	Choice	Feedback
A.	$x < 0$	
B.	$x \leq 4$	
C.	$x \geq 0$	
*D.	$x > 0$	
E.	$x < 4$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x > 0$.

Question 21a of 57 (2 Domain of Composite Functions 91595)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{-x}$$
$$G(y) = \frac{1}{y} - 2$$
$$G(F(x)) = \frac{1}{\sqrt{-x}} - 2$$

	Choice	Feedback
*A.	$x < 0$	
B.	$x \leq 2$	
C.	$x \geq 0$	
D.	$x > 0$	
E.	$x < 2$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x < 0$.

Question 21b of 57 (2 Domain of Composite Functions 310538)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{-x}$$

$$G(y) = \frac{1}{y} - 3$$

$$G(F(x)) = \frac{1}{\sqrt{-x}} - 3$$

	Choice	Feedback
*A.	$x < 0$	
B.	$x \leq 3$	
C.	$x \geq 0$	
D.	$x > 0$	
E.	$x < 3$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x < 0$.

Question 21c of 57 (2 Domain of Composite Functions 310539)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{-x}$$

$$G(y) = \frac{1}{y} - 4$$

$$G(F(x)) = \frac{1}{\sqrt{-x}} - 4$$

	Choice	Feedback
*A.	$x < 0$	
B.	$x \leq 4$	
C.	$x \geq 0$	
D.	$x > 0$	
E.	$x < 4$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x < 0$.

Question 22a of 57 (2 Domain of Composite Functions 91596)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{2-x}$$

$$G(y) = \frac{1}{y}$$

$$G(F(x)) = \frac{1}{\sqrt{2-x}}$$

	Choice	Feedback
A.	$x < 0$	
B.	$x > 2$	

C.	$x \geq 0$	
D.	$x > 0$	
*E.	$x < 2$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x < 2$.

Question 22b of 57 (2 Domain of Composite Functions 310540)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{4 - x}$$

$$G(y) = \frac{1}{y}$$

$$G(F(x)) = \frac{1}{\sqrt{4 - x}}$$

	Choice	Feedback
A.	$x < 0$	
B.	$x > 4$	
*C.	$x < 4$	
D.	$x > 0$	
E.	$x \geq 0$	

F.	All real numbers	
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Global Incorrect Feedback

The correct answer is: $x < 4$.

Question 22c of 57 (2 Domain of Composite Functions 310541)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = \sqrt{3 - x}$$

$$G(y) = \frac{1}{y}$$

$$G(F(x)) = \frac{1}{\sqrt{3 - x}}$$

	Choice	Feedback
A.	$x < 0$	
B.	$x > 3$	
C.	$x > 0$	
*D.	$x < 3$	
E.	$x \geq 0$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x < 3$.

Question 23a of 57 (2 Domain of Composite Functions 91597)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = 2 - x$$

$$G(y) = \sqrt{y}$$

$$G(F(x)) = \sqrt{2 - x}$$

	Choice	Feedback
A.	$x < 0$	
B.	$x > 2$	
C.	$x \geq 0$	
*D.	$x \leq 2$	
E.	$x < 2$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x \leq 2$.

Question 23b of 57 (2 Domain of Composite Functions 310542)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 5
Question: What is the domain of the composite function $G(F(x))$?

$F(x) = 3 - x$

$G(y) = \sqrt{y}$

$G(F(x)) = \sqrt{3 - x}$

	Choice	Feedback
A.	$x < 0$	
B.	$x > 3$	
*C.	$x \leq 3$	
D.	$x < 3$	
E.	$x \leq 0$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x \leq 3$.

Question 23c of 57 (2 Domain of Composite Functions 310543)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 5
Question: What is the domain of the composite function $G(F(x))$?

$$F(x) = 4 - x$$

$$G(y) = \sqrt{y}$$

$$G(F(x)) = \sqrt{4 - x}$$

	Choice	Feedback
*A.	$x \leq 4$	
B.	$x > 4$	
C.	$x \geq 0$	
D.	$x < 0$	
E.	$x < 4$	
F.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x \leq 4$.

Question 24a of 57 (3 Inverse Functions 91598)

Maximum Attempts:

1

Question Type:

Text Fill In Blank

Maximum Score:

5

Is Case Sensitive:

false

Correct Answer:

$3y - 3$, $3(-1 + y)$, $(-1+y)3$, $3(y - 1)$, $-3 + 3y$, $(y - 1)3$, $3y-3$, $3(-1+y)$, $(-1 + y)3$, $3(y-1)$, $-3+3y$, $(y-1)3$

Question:

Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{3} + 1$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $3y - 3$.

Question 24b of 57 (3 Inverse Functions 310544)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $4y - 4, 4(-1 + y), (-1+y)4, 4(y - 1), -4 + 4y, (y - 1)4, 4y-4, 4(-1+y), (-1 + y)4, 4(y-1), -4+4y, (y-1)4$

Question: Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{4} + 1$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $4y - 4$.

Question 24c of 57 (3 Inverse Functions 310545)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $5y - 5, 5(-1 + y), (-1+y)5, 5(y - 1), -5 + 5y, (y - 1)5, 5y-5, 5(-1+y), (-1 + y)5, 5(y-1), -5+5y, (y-1)5$

Question: Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{5} + 1$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $5y - 5$.

Question 25a of 57 (3 Inverse Functions 91599)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(1/2)y + 3/2$, $1/2y + 3/2$, $3/2 + (1/2)y$, $3/2 + 1/2y$, $1/2(y + 3)$, $1/2(3 + y)$, $(y + 3)/2$, $(3 + y)/2$, $3/2 + y/2$, $y/2 + 3/2$, $(1/2)(y+3)$, $(1/2)(3 + y)$, $(y+3)/2$, $(3+y)/2$, $3/2 + (1/2)y$, $(1/2)y + 3/2$, $3/2 + 1/2*y$, $1/2*y + 3/2$, $1/2*(y + 3)$, $1/2*(3 + y)$, $(1/2)*(y+3)$, $(1/2)*(3 + y)$, $3/2 + (1/2)*y$, $(1/2)*y + 3/2$

Question: Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol. Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$$F(x) = 2x - 3$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $\frac{1}{2}y + \frac{3}{2}$.

Question 25b of 57 (3 Inverse Functions 310546)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(1/3)y+2/3$, $2/3 + 1/3y$, $1/3y + 2/3$, $1/3(y + 2)$, $1/3(2 + y)$, $(y + 2)/3$, $(2 + y)/3$, $2/3+y/3$, $y/3+2/3$, $(1/3)(y+2)$, $(1/3)(2 + y)$, $(y+2)/3$, $(2+y)/3$, $2/3 + (1/3)y$, $(1/3)y+2/3$, $2/3 + 1/3*y$, $1/3*y + 2/3$, $1/3*(y + 2)$, $1/3*(2 + y)$, $(1/3)*(y+2)$, $(1/3)*(2 + y)$, $2/3 + (1/3)*y$, $(1/3)*y+2/3$

Question: Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol. Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$$F(x) = 3x - 2$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $\frac{1}{3}y + \frac{2}{3}$.

Question 25c of 57 (3 Inverse Functions 310547)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer:

$(1/4)y+3/4, 1/4y + 3/4, 3/4 + 1/4y, 1/4(y + 3), 1/4(3 + y), (y + 3)/4, (3 + y)/4, 3/4+y/4, y/4+3/4, (1/4)(y+3), (1/4)(3 + y), (y+3)/4, (3+y)/4, 3/4 + (1/4)y, (1/4)y+3/4, 3/4 + 1/4*y, 1/4*y + 3/4, 1/4*(y + 3), 1/4*(3 + y), (1/4)*(y+3), (1/4)*(3 + y), 3/4 + (1/4)*y, (1/4)*y+3/4$

Question:

Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol.
Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$F(x) = 4x - 3$

$F^{-1}(y) =$ _____

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $\frac{1}{4}y + \frac{3}{4}$.

Question 26a of 57 (3 Inverse Functions 91600)

Maximum Attempts:

1

Question Type:

Text Fill In Blank

Maximum Score:

5

Is Case Sensitive:

false

Correct Answer:

$(1/3)y + 1, y/3 + 1, 1/3(y + 3), 1/3(y) + 1, (y + 3)/3, y/3 +1, 1/3(y+3), 1/3(y)+1, (y+3)/3, (y/3)+1$

Question:

Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol.
Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$$F(x) = 3x - 3$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $\frac{1}{3}y + 1$.

Question 26b of 57 (3 Inverse Functions 310548)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(1/2)y + 1, y/2 + 1, 1/2(y + 2), 1/2(y) + 1, (y + 2)/2, y/2 + 1, 1/2(y+2), 1/2(y)+1, (y+2)/2, (y/2)+1$

Question: Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol. Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$$F(x) = 2x - 2$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
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Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $\frac{1}{2}y + 1$.

Question 26c of 57 (3 Inverse Functions 310549)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(1/4)y + 1$, $y/4 + 1$, $1/4(y + 4)$, $1/4(y) + 1$, $(y + 4)/4$, $y/4 + 1$, $1/4(y+4)$, $1/4(y)+1$, $(y+4)/4$, $(y/4)+1$

Question: Complete the inverse of $F(x)$ below. If necessary, use the slash mark (/) for the division symbol. Do not include decimals or " $F^{-1}(y) =$ " in your answer.

$$F(x) = 4x - 4$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	
	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $\frac{1}{4}y + 1$.

Question 27a of 57 (3 Inverse Functions 91601)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $2y + 1, 1 + 2y, 2(1/2 + y), 2(y + 1/2), (y + 1/2)2, (1/2 + y)2$

Question: Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{2} - \frac{1}{2}$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $2y + 1$.

Question 27b of 57 (3 Inverse Functions 310550)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $3y + 1$, $1 + 3y$, $3(1/3 + y)$, $3(y + 1/3)$, $(y + 1/3)3$, $(1/3 + y)3$

Question: Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{3} - \frac{1}{3}$$

$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $3y + 1$.

Question 27c of 57 (3 Inverse Functions 310551)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $4y + 1, 1 + 4y, 4(1/4 + y), 4(y + 1/4), (y + 1/4)4, (1/4 + y)4$

Question: Complete the inverse of $F(x)$ below. Do not include " $F^{-1}(y) =$ " in your answer.

$$F(x) = \frac{x}{4} - \frac{1}{4}$$
$$F^{-1}(y) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $4y + 1$.

Question 28a of 57 (3 Conic Sections 91602)

Maximum Attempts: 1

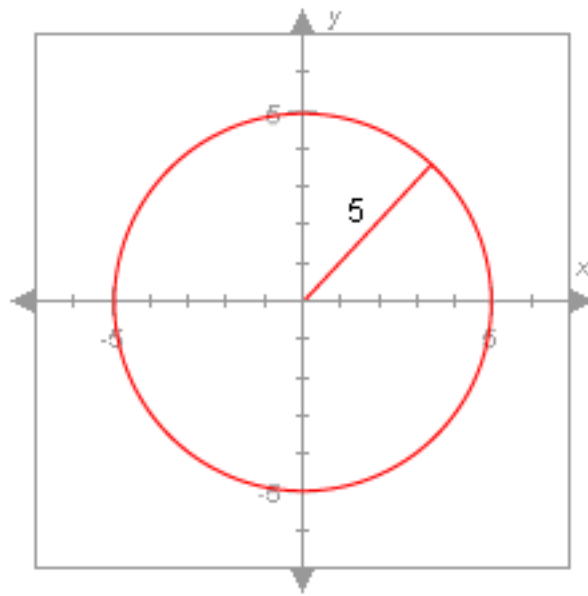
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 25, (x^2 + y^2)/25 = 1, 1/25(x^2 + y^2) = 1, (1/25)(x^2 + y^2) = 1, y^2 + x^2 = 25, (y^2 + x^2)/25 = 1, (1/25)(y^2 + x^2) = 1, 1/25(y^2 + x^2) = 1, x^2+y^2=5^2$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 25$.

Question 28b of 57 (3 Conic Sections 310552)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

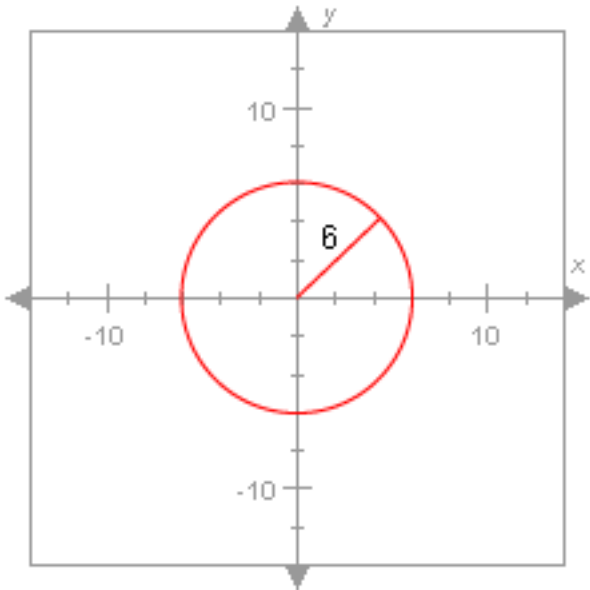
Correct Answer: $x^2 + y^2 = 36$, $(x^2 + y^2)/36 = 1$, $1/36(x^2 + y^2) = 1$, $(1/36)(x^2 + y^2) = 1$, $y^2 + x^2 =$

Correct Answer:

$36, (y^2 + x^2)/36 = 1, (1/36)(y^2 + x^2) = 1, 1/36(y^2 + x^2) = 1, x^2+y^2=6^2$

Question:

What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 36$.

Question 28c of 57 (3 Conic Sections 310554)

Maximum Attempts: 1

Question Type:

Maximum Score:

Is Case Sensitive:

Correct Answer:

Question:

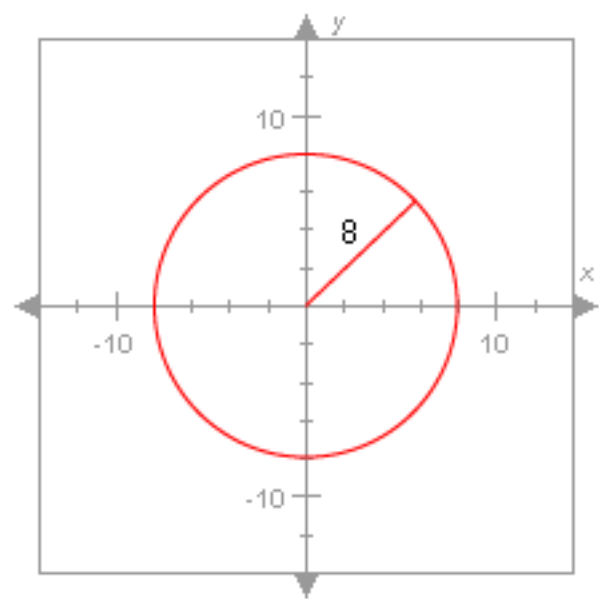
Text Fill In Blank

5

false

$x^2 + y^2 = 64$, $(x^2 + y^2)/64 = 1$, $1/64(x^2 + y^2) = 1$, $(1/64)(x^2 + y^2) = 1$, $y^2 + x^2 = 64$, $(y^2 + x^2)/64 = 1$, $(1/64)(y^2 + x^2) = 1$, $1/64(y^2 + x^2) = 1$, $x^2+y^2=8^2$

What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 64$.

Question 29a of 57 (3 Conic Sections 91603)

Maximum Attempts: 1

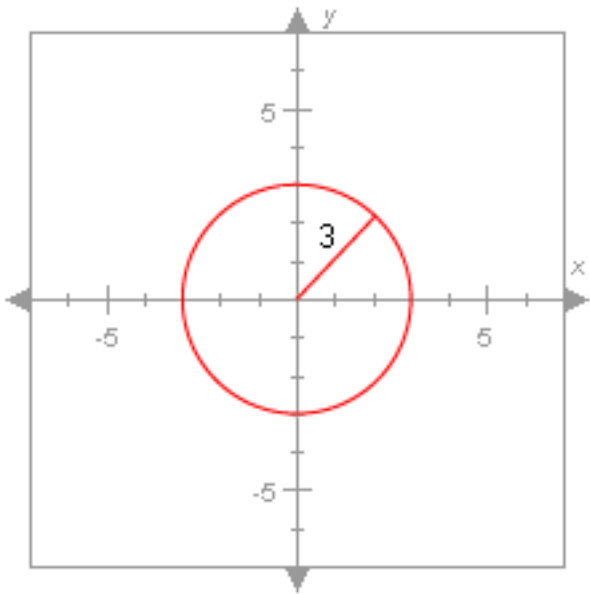
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 9$, $(x^2 + y^2)/9 = 1$, $1/9(x^2 + y^2) = 1$, $(1/9)(x^2 + y^2) = 1$, $y^2 + x^2 = 9$, $(y^2 + x^2)/9 = 1$, $(1/9)(y^2 + x^2) = 1$, $1/9(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 9$.

Question 29b of 57 (3 Conic Sections 310555)

Maximum Attempts: 1

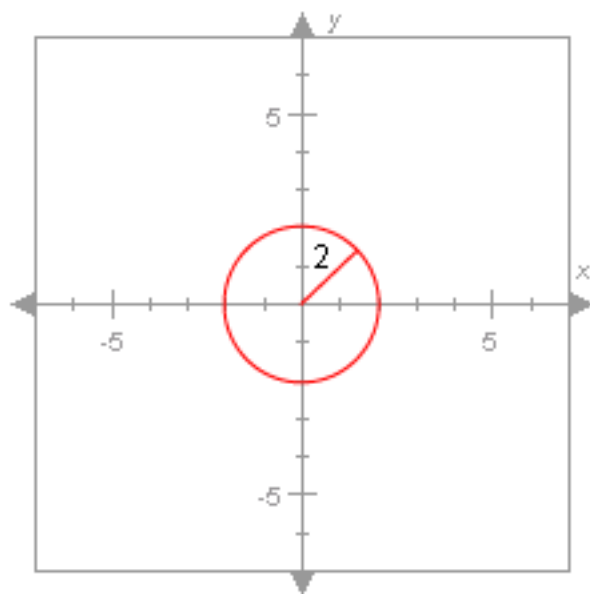
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 4$, $(x^2 + y^2)/4 = 1$, $1/4(x^2 + y^2) = 1$, $(1/4)(x^2 + y^2) = 1$, $y^2 + x^2 = 4$, $(y^2 + x^2)/4 = 1$, $(1/4)(y^2 + x^2) = 1$, $1/4(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
----------------	---------------------------

1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 4$.

Question 29c of 57 (3 Conic Sections 310556)

Maximum Attempts: 1

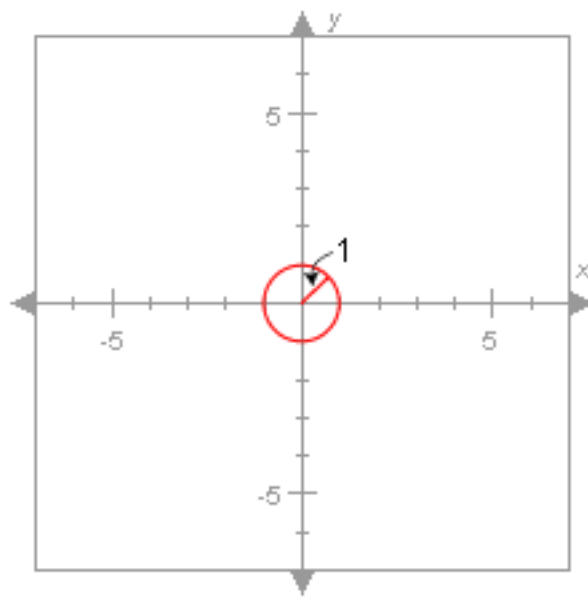
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 1$, $(x^2 + y^2) = 1$, $1/1(x^2 + y^2) = 1$, $(1/1)(x^2 + y^2) = 1$, $y^2 + x^2 = 1$, $(y^2 + x^2) = 1$, $1(y^2 + x^2) = 1$, $1/1(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 1$.

Question 30a of 57 (2 Conic Sections 91604)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

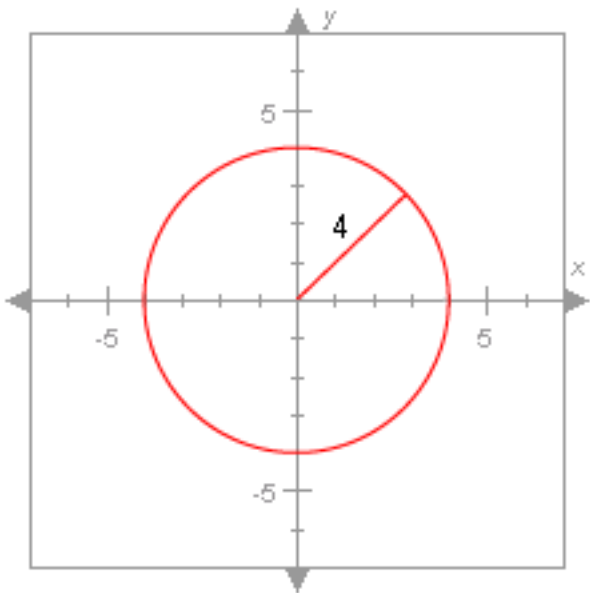
$$x^2 + y^2 = 16 \quad (x^2 + y^2)/16 = 1 \quad 1/16(x^2 + y^2) = 1 \quad (1/16)(x^2 + y^2) = 1 \quad x^2 + y^2 =$$

Correct Answer:

$x^2 + y^2 = 16$, $(x^2 + y^2)/16 = 1$, $1/16(x^2 + y^2) = 1$, $(1/16)(x^2 + y^2) = 1$, $y^2 + x^2 = 16$, $(y^2 + x^2)/16 = 1$, $(1/16)(y^2 + x^2) = 1$, $1/16(y^2 + x^2) = 1$

Question:

What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 16$.

Question 30b of 57 (2 Conic Sections 310557)

Maximum Attempts: 1

Question Type:

Maximum Score:

Is Case Sensitive:

Correct Answer:

Question:

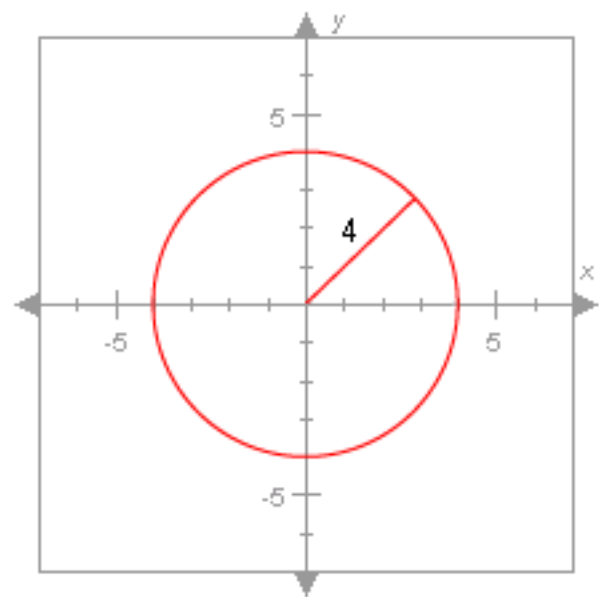
Text Fill In Blank

5

false

$x^2 + y^2 = 16$, $(x^2 + y^2)/16 = 1$, $1/16(x^2 + y^2) = 1$, $(1/16)(x^2 + y^2) = 1$, $y^2 + x^2 = 16$, $(y^2 + x^2)/16 = 1$, $(1/16)(y^2 + x^2) = 1$, $1/16(y^2 + x^2) = 1$

What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 16$.

Question 30c of 57 (2 Conic Sections 310558)

Maximum Attempts: 1

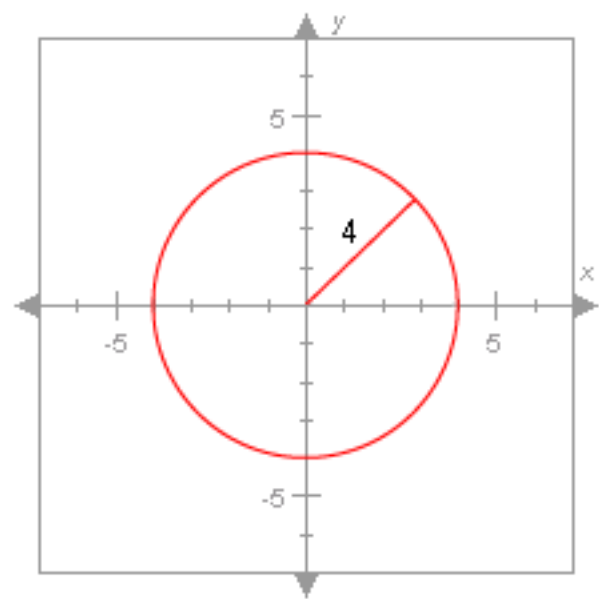
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 16$, $(x^2 + y^2)/16 = 1$, $1/16(x^2 + y^2) = 1$, $(1/16)(x^2 + y^2) = 1$, $y^2 + x^2 = 16$, $(y^2 + x^2)/16 = 1$, $(1/16)(y^2 + x^2) = 1$, $1/16(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 16$.

Question 31a of 57 (2 Graphing Parabolas 91605)

Maximum Attempts: 1

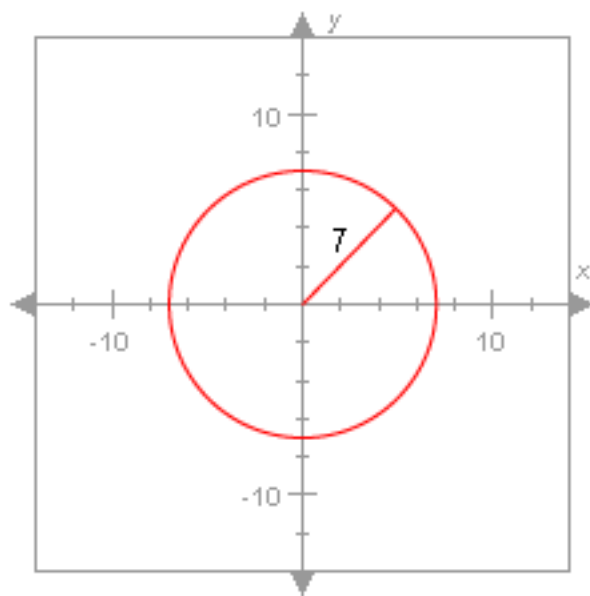
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 49$, $(x^2 + y^2)/49 = 1$, $1/49(x^2 + y^2) = 1$, $(1/49)(x^2 + y^2) = 1$, $y^2 + x^2 = 49$, $(y^2 + x^2)/49 = 1$, $1/49(y^2 + x^2) = 1$, $(1/49)(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
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1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 49$.

Question 31b of 57 (2 Graphing Parabolas 310559)

Maximum Attempts: 1

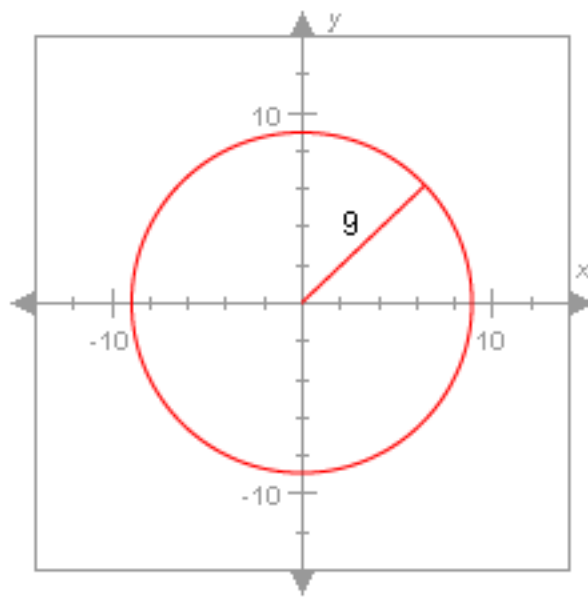
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + y^2 = 81$, $(x^2 + y^2)/81 = 1$, $1/81(x^2 + y^2) = 1$, $(1/81)(x^2 + y^2) = 1$, $y^2 + x^2 = 81$, $(y^2 + x^2)/81 = 1$, $1/81(y^2 + x^2) = 1$, $(1/81)(y^2 + x^2) = 1$

Question: What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 81$.

Question 31c of 57 (2 Graphing Parabolas 310560)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

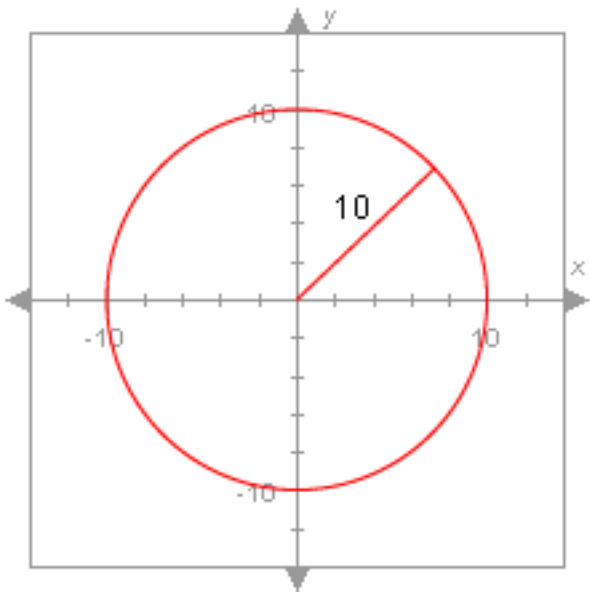
$$x^2 + y^2 = 100 \quad (x^2 + y^2)/100 = 1 \quad 1/100(x^2 + y^2) = 1 \quad (1/100)(x^2 + y^2) = 1 \quad x^2 + y^2 = 100$$

Correct Answer:

$x^2 + y^2 = 100$, $(x^2 + y^2)/100 = 1$, $1/100(x^2 + y^2) = 1$, $(1/100)(x^2 + y^2) = 1$, $y^2 + x^2 = 100$, $(y^2 + x^2)/100 = 1$, $1/100(y^2 + x^2) = 1$, $(1/100)(y^2 + x^2) = 1$

Question:

What is the equation of the circle graphed below? Use the caret (^) to enter any exponents; for example, write x^2 as x^2 .



Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + y^2 = 100$.

Question 32a of 57 (2 Graphing Parabolas 91606)

Maximum Attempts: 1

Question Type:

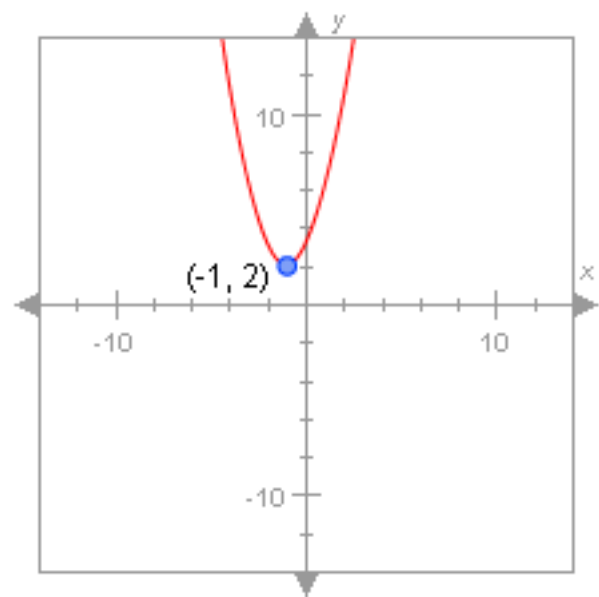
Maximum Score:

Question:

Multiple Choice

5

The vertex of the parabola below is at the point $(-1, 2)$. Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = (x - 1)^2 - 2$	
*B.	$y = (x + 1)^2 + 2$	
C.	$y = 2x^2 + 2$	
D.	$y = x^2$	

Global Incorrect Feedback

The correct answer is: $y = (x + 1)^2 + 2$.

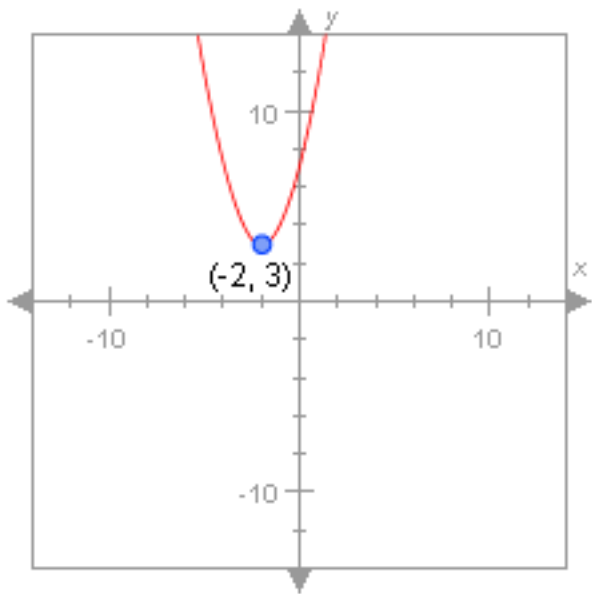
Question 32b of 57 (2 Graphing Parabolas 310561)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (-2, 3). Which of the following could be this parabola's equation?



	Choice	Feedback
*A.	$y = (x + 2)^2 + 3$	
B.	$y = (x - 2)^2 + 3$	
C.	$y = 2x^2 + 3$	
D.	$y = x^2$	

Global Incorrect Feedback
The correct answer is: $y = (x + 2)^2 + 3$.

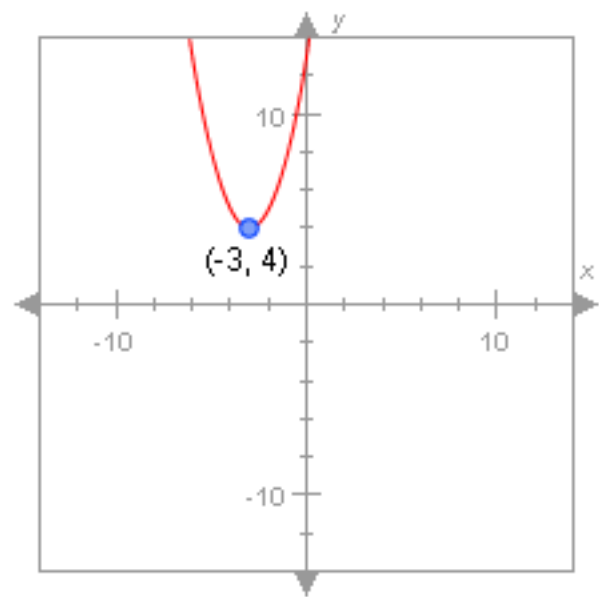
Question 32c of 57 (2 Graphing Parabolas 310563)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point $(-3, 4)$. Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = 3(x - 1)^2 - 4$	
B.	$y = x^2$	

*C.	$y = (x + 3)^2 + 4$	
D.	$y = (x - 3)^2 - 4$	

Global Incorrect Feedback

The correct answer is: $y = (x + 3)^2 + 4$.

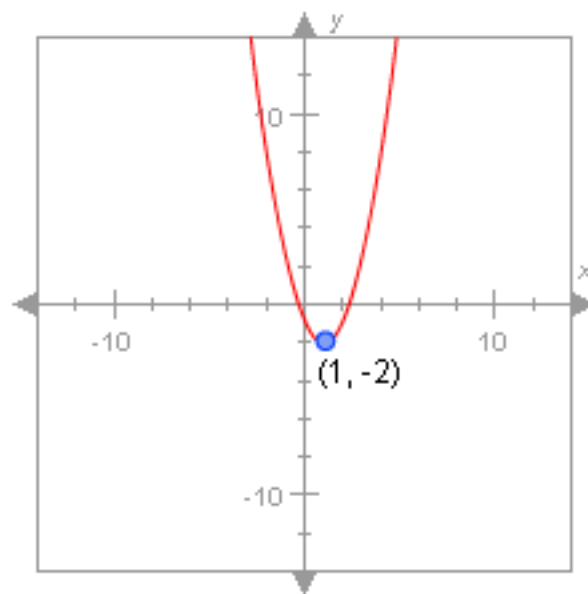
Question 33a of 57 (2 Graphing Parabolas 91607)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (1, -2). Which of the following could be this parabola's equation?



	Choice	Feedback
*A.	$y = (x - 1)^2 - 2$	
B.	$y = (x + 1)^2 + 2$	
C.	$y = 2x^2 + 2$	
D.	$y = x^2$	

Global Incorrect Feedback

The correct answer is: $y = (x - 1)^2 - 2$.

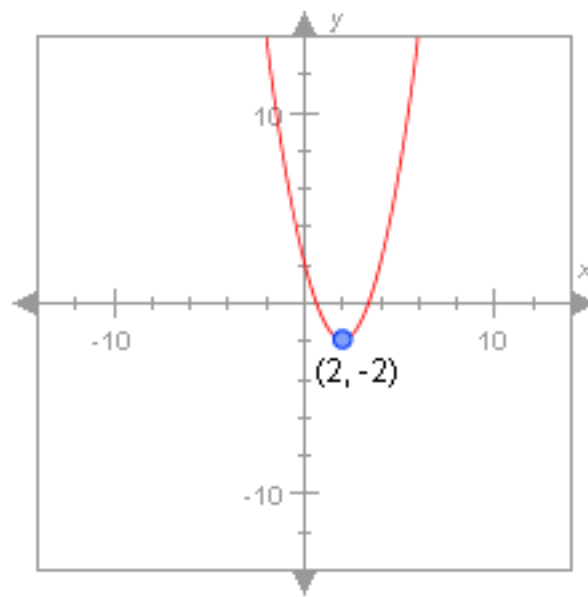
Question 33b of 57 (2 Graphing Parabolas 310564)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (2, -2). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = x^2$	
B.	$y = (x + 2)^2 + 2$	
C.	$y = 2x^2 + 2$	
*D.	$y = (x - 2)^2 - 2$	

Global Incorrect Feedback

The correct answer is: $y = (x - 2)^2 - 2$.

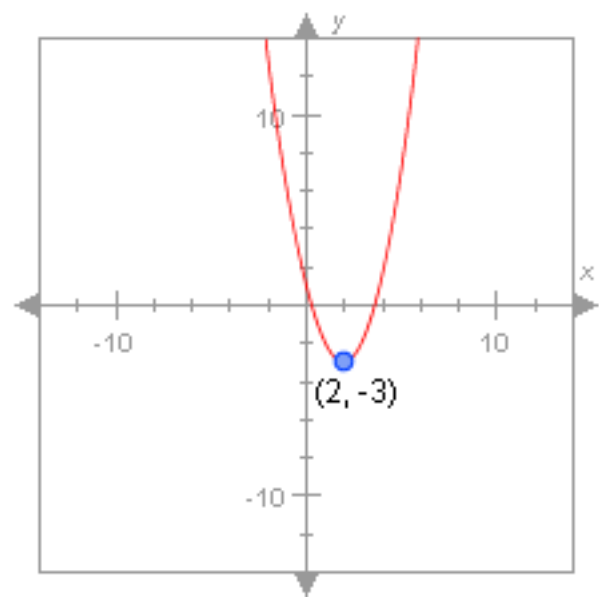
Question 33c of 57 (2 Graphing Parabolas 310565)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (2, -3). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = (x + 2)^2 + 3$	
B.	$y = 2x^2 + 3$	
*C.	$y = (x - 2)^2 - 3$	
D.	$y = x^2$	

Global Incorrect Feedback

The correct answer is: $y = (x - 2)^2 - 3$.

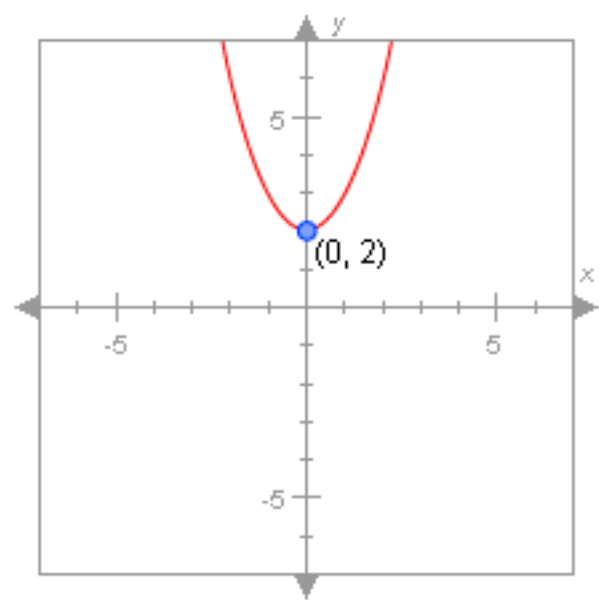
Question 34a of 57 (2 Graphing Parabolas 91608)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (0, 2). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = (x - 1)^2 - 2$	
B.	$y = (x + 2)^2$	
C.	$y = 2x^2 - 2$	
*D.	$y = x^2 + 2$	

Global Incorrect Feedback

The correct answer is: $y = x^2 + 2$.

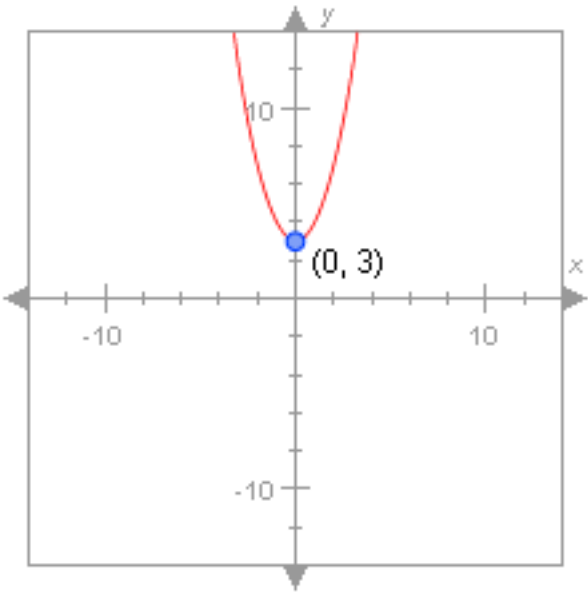
Question 34b of 57 (2 Graphing Parabolas 310566)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (0, 3). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = (x - 3)^2 - 3$	
B.	$y = (x + 3)^2$	

*C.	$y = x^2 + 3$	
D.	$y = 3x^2 - 3$	

Global Incorrect Feedback
The correct answer is: $y = x^2 + 3$.

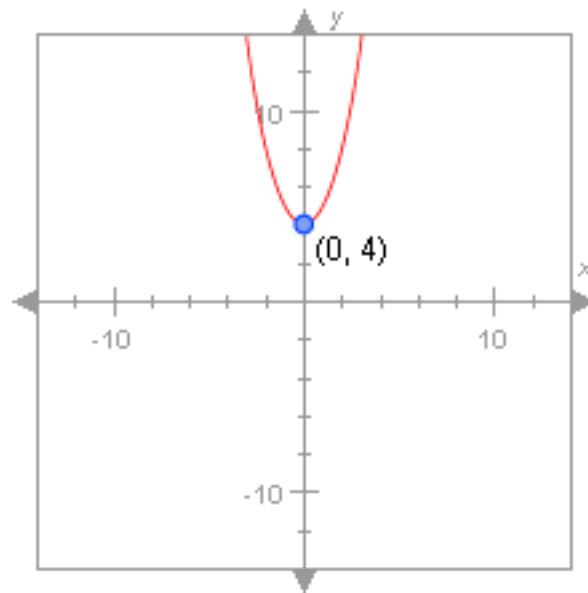
Question 34c of 57 (2 Graphing Parabolas 310568)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (0, 4). Which of the following could be this parabola's equation?



	Choice	Feedback
--	--------	----------

A.	$y = (x - 1)^2 - 4$	
B.	$y = (x + 4)^2$	
*C.	$y = x^2 + 4$	
D.	$y = 2x^2 - 4$	

Global Incorrect Feedback

The correct answer is: $y = x^2 + 4$.

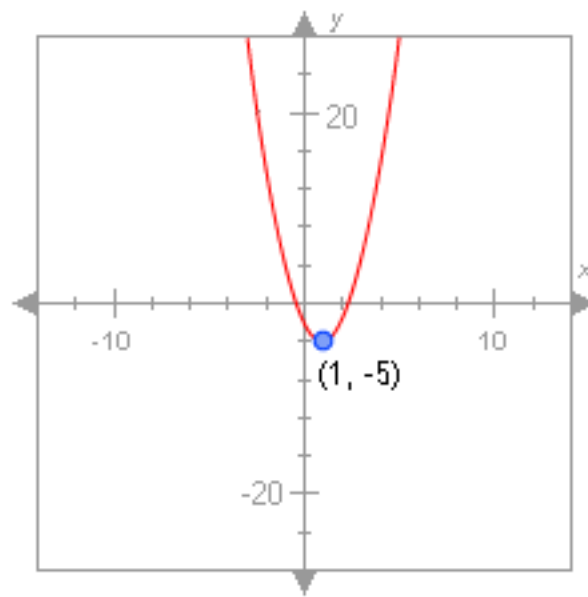
Question 35a of 57 (2 Graphing Parabolas 91609)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (1, -2). Which of the following could be this parabola's equation?



	Choice	Feedback
*A.	$y = (x - 1)^2 - 5$	
B.	$y = (x + 1)^2 + 5$	
C.	$y = 2x^2 + 5$	
D.	$y = x^5$	

Global Incorrect Feedback

The correct answer is: $y = (x - 1)^2 - 5$.

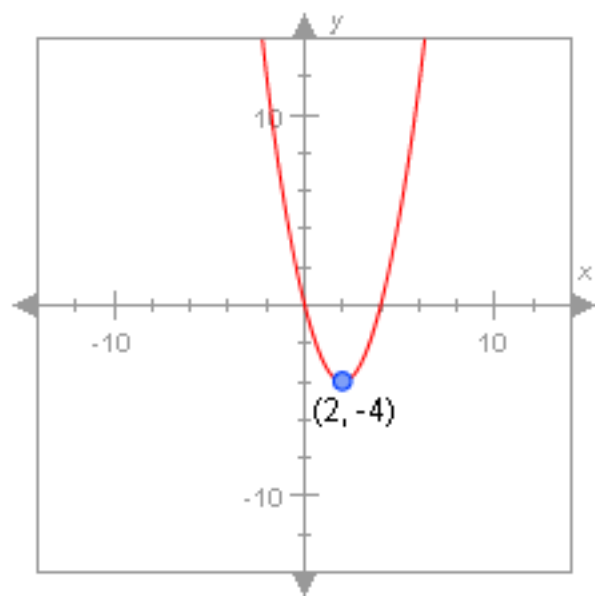
Question 35b of 57 (2 Graphing Parabolas 310569)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (2, -4). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = (x + 2)^2 + 4$	
B.	$y = x^2$	
C.	$y = 4x^2 + 4$	
*D.	$y = (x - 2)^2 - 4$	

Global Incorrect Feedback

The correct answer is: $y = (x - 2)^2 - 4$.

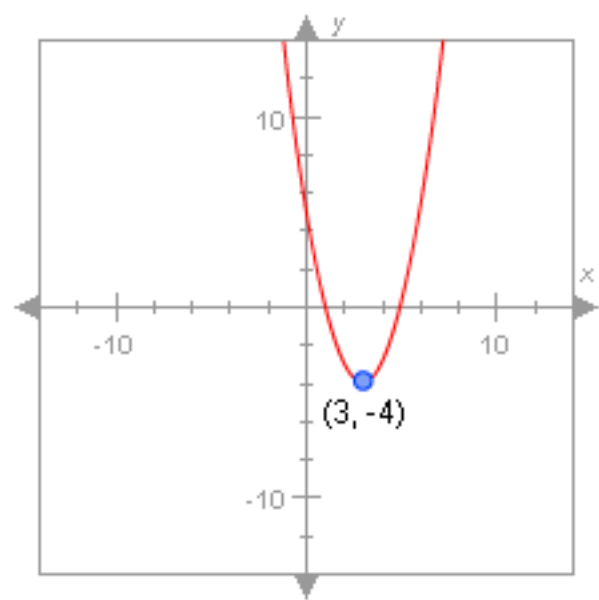
Question 35c of 57 (2 Graphing Parabolas 310570)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: The vertex of the parabola below is at the point (3, -4). Which of the following could be this parabola's equation?



	Choice	Feedback
A.	$y = 2x^2 + 4$	
B.	$y = (x + 3)^2 + 4$	
*C.	$y = (x - 3)^2 - 4$	
D.	$y = x^2$	

Global Incorrect Feedback

The correct answer is: $y = (x - 3)^2 - 4$.

Question 36a of 57 (3 Solving a System of Equations 142679)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the coordinate pairs below is a solution to the following system of equations?

$$5x^2 - 2y^2 = -93$$

$$7x^2 - y^2 = 174$$

	Choice	Feedback
A.	(5, -1)	
B.	(7, -1)	
*C.	(7, -13)	
D.	(2, -1)	

Global Incorrect Feedback

The correct answer is: (7, -13).

Question 36b of 57 (3 Solving a System of Equations 310571)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question:

Which of the coordinate pairs below is a solution to the following system of equations?

$$5x^2 - 2y^2 = -163$$

$$7x^2 - y^2 = 31$$

	Choice	Feedback
*A.	(5, 12)	
B.	(5, -1)	
C.	(7, -1)	
D.	(2, -1)	

Global Incorrect Feedback

The correct answer is: (5, 12).

Question 36c of 57 (3 Solving a System of Equations 310572)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question:

Which of the coordinate pairs below is a solution to the following system of equations?

$$5x^2 - 2y^2 = -20$$

$$7x^2 - y^2 = 152$$

	Choice	Feedback
A.	(5, -1)	
*B.	(6, 10)	
C.	(7, -1)	

D.	(2, -1)	
----	---------	--

Global Incorrect Feedback

The correct answer is: (6, 10).

Question 37a of 57 (2 Solving a System of Equations 142695)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the coordinate pairs below is a solution to the following system of equations?

$$x^2 + y^2 = 169$$

$$x + y = 17$$

	Choice	Feedback
A.	(3, 10)	
*B.	(12, 5)	
C.	(9, 8)	
D.	(18, -1)	

Global Incorrect Feedback

The correct answer is: (12, 5).

Question 37b of 57 (2 Solving a System of Equations 310574)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the coordinate pairs below is a solution to the following system of equations?

$$x^2 + y^2 = 157$$
$$x + y = 17$$

	Choice	Feedback
A.	(3, 10)	
B.	(12, 2)	
C.	(9, 8)	
*D.	(11, 6)	

Global Incorrect Feedback
The correct answer is: (11, 6).

Question 37c of 57 (2 Solving a System of Equations 310575)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the coordinate pairs below is a solution to the following system of equations?

$$x^2 + y^2 = 185$$
$$x + y = 17$$

	Choice	Feedback
*A.	(13, 4)	
B.	(12, 3)	

C.	(9, 8)	
D.	(18, -1)	

Global Incorrect Feedback

The correct answer is: (13, 4).

Question 38a of 57 (3 Solving Inequalities 142698)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$-5x^2 + 20x - 17 > y$$

	Choice	Feedback
A.	(5, 2)	
B.	(0, 0)	
*C.	(2, 2)	
D.	(1, 5)	

Global Incorrect Feedback

The correct answer is: (2, 2).

Question 38b of 57 (3 Solving Inequalities 310576)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$5x^2 - 25x + 13 < y$$

	Choice	Feedback
A.	(-2, -2)	
B.	(0, 0)	
C.	(5, 2)	
*D.	(1, 5)	

Global Incorrect Feedback

The correct answer is: (1, 5).

Question 38c of 57 (3 Solving Inequalities 310577)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$-6x^2 + 20x - 17 > y$$

	Choice	Feedback
A.	(5, 2)	
B.	(0, 0)	
*C.	(2, -2)	

D.	(1, 5)	
----	--------	--

Global Incorrect Feedback

The correct answer is: (2, -2).

Question 39a of 57 (3 Solving Inequalities 142795)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$\frac{x^2}{4^2} - \frac{y^2}{5^2} \leq 1$$

	Choice	Feedback
A.	(7, 1)	
B.	(-14, 3)	
*C.	(2, 0)	
D.	(-8, -2)	

Global Incorrect Feedback

The correct answer is: (2, 0).

Question 39b of 57 (3 Solving Inequalities 310578)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$\frac{x^2}{3^2} - \frac{y^2}{4^2} \leq 1$$

	Choice	Feedback
*A.	(3, 1)	
B.	(-12, 4)	
C.	(4, 0)	
D.	(-8, -2)	

Global Incorrect Feedback

The correct answer is: (3, 1).

Question 39c of 57 (3 Solving Inequalities 310579)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is a solution to the inequality below?

$$\frac{x^2}{5^2} - \frac{y^2}{6^2} \leq 1$$

	Choice	Feedback
A.	(7, 1)	

*B.	(3, 0)	
C.	(12, 0)	
D.	(-8, -2)	

Global Incorrect Feedback

The correct answer is: (3, 0).

Question 40a of 57 (2 Compositions of Functions 142800)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: If $G(x) = (x + 3)^2$, and $F(x) = x^2 + 7x$, what is the function $G(F(x))$?

	Choice	Feedback
A.	$(x + 3)^4 + 7(x + 3)^2$	
*B.	$(x^2 + 7x + 3)^2$	
C.	$(x + 3)^2 + x^2 + 7x$	
D.	$\ln(x + 3)$	

Global Incorrect Feedback

The correct answer is: $(x^2 + 7x + 3)^2$.

Question 40b of 57 (2 Compositions of Functions 310581)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: If $G(x) = (x + 4)^2$, and $F(x) = x^2 + 8x$, what is the function $G(F(x))$?

	Choice	Feedback
A.	$(x + 4)^4 + 8(x + 4)^2$	
B.	$(x + 4)^2 + x^2 + 8x$	
*C.	$(x^2 + 8x + 4)^2$	
D.	$\ln(x + 3)$	

Global Incorrect Feedback

The correct answer is: $(x^2 + 8x + 4)^2$.

Question 40c of 57 (2 Compositions of Functions 310584)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: If $G(x) = (x + 5)^2$, and $F(x) = x^2 + 9x$, what is the function $G(F(x))$?

	Choice	Feedback
*A.	$(x^2 + 9x + 5)^2$	

B.	$(x + 5)^4 + 9(x + 5)^2$	
C.	$(x + 5)^2 + x^2 + 9x$	
D.	$\ln(x + 5)$	

Global Incorrect Feedback

The correct answer is: $(x^2 + 9x + 5)^2$.

Question 41a of 57 (2 Domains for Compositions 142802)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question:

If the domain of $G(x) = \sqrt{\frac{1}{x-3}}$ is $x > 3$, and the domain of $F(x) = \sqrt{x-6}$ is $x > 6$, what is the domain of $G(F(x))$?

	Choice	Feedback
A.	$x > 18$	
B.	$x < 36$	
*C.	$x > 15$	
D.	$x > 9$	

Global Incorrect Feedback

The correct answer is: $x > 15$.

Question 41b of 57 (2 Domains for Compositions 142802)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: If the domain of $G(x) = \sqrt{\frac{1}{x-3}}$ is $x > 3$, and the domain of $F(x) = \sqrt{x-6}$ is $x > 6$, what is the domain of $G(F(x))$?

	Choice	Feedback
A.	$x > 18$	
B.	$x < 36$	
*C.	$x > 15$	
D.	$x > 9$	

Global Incorrect Feedback

The correct answer is: $x > 15$.

Question 41c of 57 (2 Domains for Compositions 142802)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: If the domain of $G(x) = \sqrt{\frac{1}{x-3}}$ is $x > 3$, and the domain of $F(x) = \sqrt{x-6}$ is $x > 6$, what is the domain of $G(F(x))$?



	Choice	Feedback
A.	$x > 18$	
B.	$x < 36$	
*C.	$x > 15$	
D.	$x > 9$	

Global Incorrect Feedback

The correct answer is: $x > 15$.

Question 42a of 57 (2 Domain and Range 142815)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is *not* in the range of $6(x - 3)^2$?

	Choice	Feedback
*A.	-2	
B.	300	
C.	6	
D.	36	

Global Incorrect Feedback

The correct answer is: -2.

Question 42b of 57 (2 Domain and Range 310588)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is *not* in the range of $4(x - 4)^2$?

	Choice	Feedback
A.	2	
B.	300	
*C.	-6	
D.	36	

Global Incorrect Feedback

The correct answer is: -6.

Question 42c of 57 (2 Domain and Range 310589)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following is *not* in the range of $7(x - 2)^2$?

	Choice	Feedback
A.	12	
B.	300	
C.	6	

*D.	-3
-----	----

Global Incorrect Feedback

The correct answer is: -3.

Question 43a of 57 (2 Conic Sections 142867)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the length of the transverse axis of the hyperbola whose equation is given below?

$$\frac{(x-7)^2}{9^2} - \frac{(y-4)^2}{5^2} = 1$$

	Choice	Feedback
A.	14	
*B.	18	
C.	7	
D.	8	

Global Incorrect Feedback

The correct answer is: 18.

Question 43b of 57 (2 Conic Sections 310590)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the length of the transverse axis of the hyperbola whose equation is given below?

$$\frac{(x-8)^2}{8^2} - \frac{(y-5)^2}{4^2} = 1$$

	Choice	Feedback
*A.	16	
B.	18	
C.	7	
D.	8	

Global Incorrect Feedback
The correct answer is: 16.

Question 43c of 57 (2 Conic Sections 310591)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the length of the transverse axis of the hyperbola whose equation is given below?

$$\frac{(x-9)^2}{7^2} - \frac{(y-6)^2}{3^2} = 1$$

	Choice	Feedback
A.	7	

B.	18	
*C.	14	
D.	6	

Global Incorrect Feedback

The correct answer is: 14.

Question 44a of 57 (2 Shifting Graphs of Quadratics 91618)

Maximum Attempts: 1

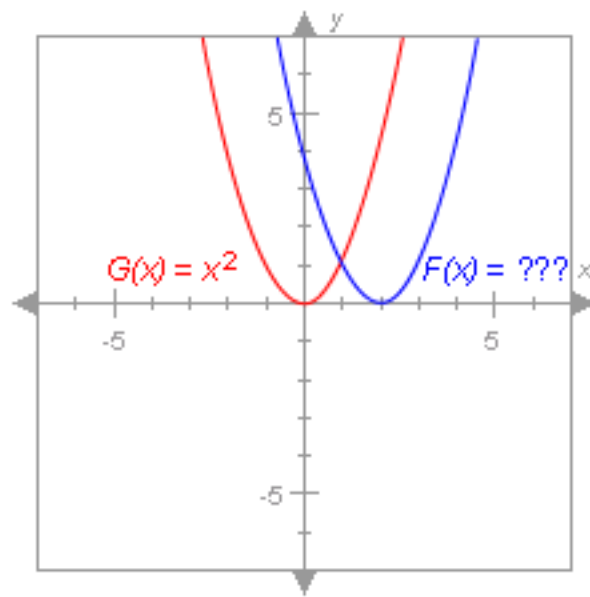
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(x - 2)^2$, $(-2 + x)(-2 + x)$, $(-2 + x)^2$, $(x - 2)(x - 2)$, $(x-2)(x-2)$, $(-2+x)(-2+x)$, $(-2+x)^2$, $(x-2)^2$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) = \underline{\hspace{2cm}}$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $(x - 2)^2$.

Question 44b of 57 (2 Shifting Graphs of Quadratics 310592)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive:

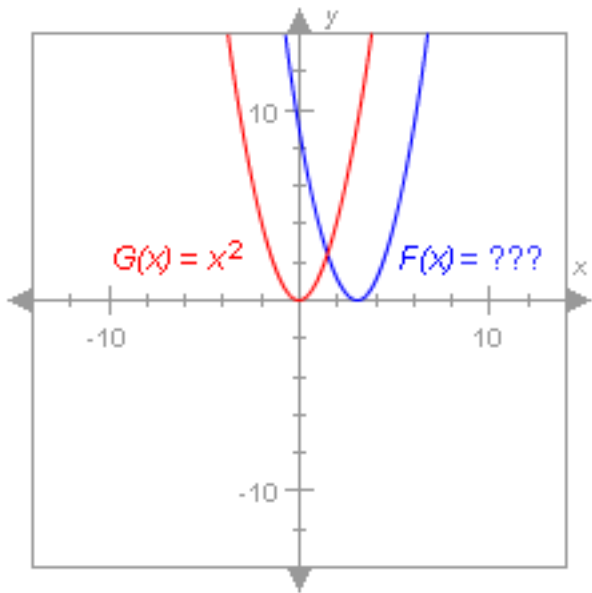
false

Correct Answer:

$(x - 3)^2, (x-3)(x-3), (-3+x)(-3+x), (-3+x)^2, (x-3)^2, (x-3)(x-3), (-3+x)(-3+x), (-3+x)^2$

Question:

The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



F(x) = _____

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 3)^2$.

Question 44c of 57 (2 Shifting Graphs of Quadratics 310593)

Maximum Attempts: 1

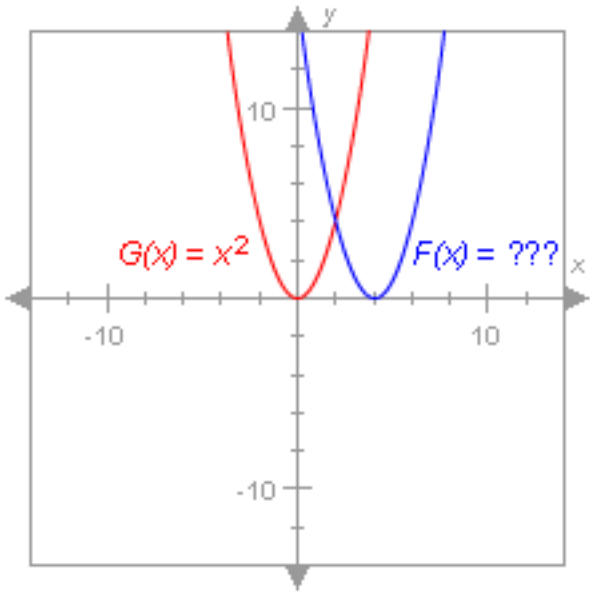
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(x - 4)^2$, $(x-4)(x-4)$, $(-4+x)(-4+x)$, $(-4+x)^2$, $(x-4)(x-4)$, $(-4+x)(-4+x)$, $(-4+x)^2$, $(x-4)^2$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



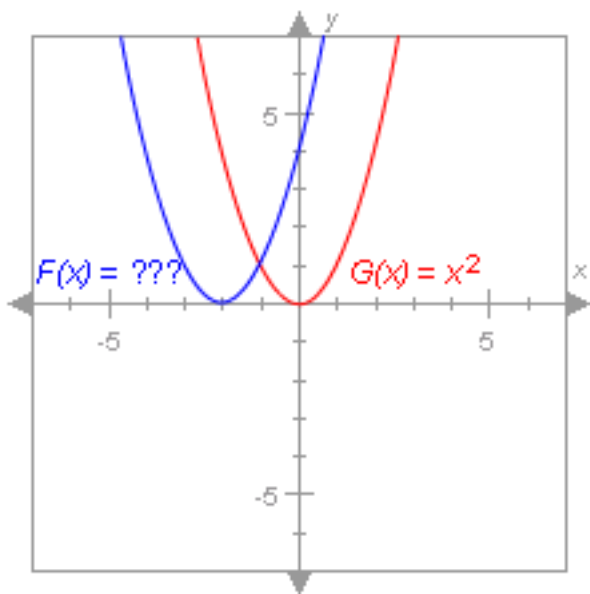
$F(x) =$ _____

Attempt	Incorrect Feedback
1st	
	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 4)^2$.

Question 45a of 57 (2 Shifting Graphs of Quadratics 91619)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $(x + 2)^2$, $(2 + x)(2 + x)$, $(2 + x)^2$, $(x + 2)(x + 2)$, $(x+2)(x+2)$, $(2+x)(2+x)$, $(2+x)^2$, $(x+2)^2$
Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$$F(x) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $(x + 2)^2$.

Question 45b of 57 (2 Shifting Graphs of Quadratics 310595)

Maximum Attempts: 1

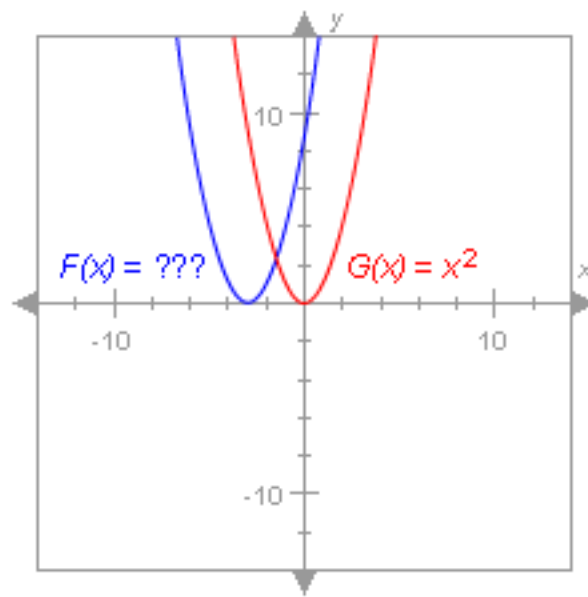
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(x + 3)^2$, $(x + 3)(x + 3)$, $(3 + x)(3 + x)$, $(3 + x)^2$, $(x + 3)^2$, $(x+3)(x+3)$, $(3+x)(3+x)$, $(3+x)^2$, $(x+3)^2$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) = \underline{\hspace{2cm}}$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $(x + 3)^2$.

Question 45c of 57 (2 Shifting Graphs of Quadratics 310596)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive:

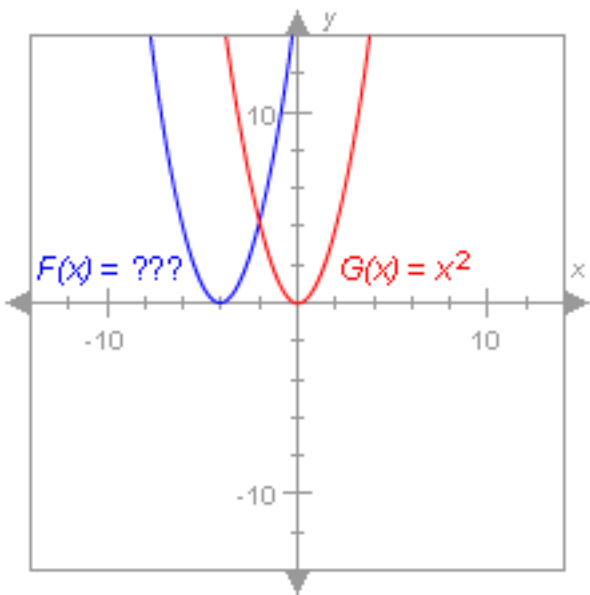
false

Correct Answer:

$(x + 4)^2$, $(x + 4)(x + 4)$, $(4 + x)(4 + x)$, $(4 + x)^2$, $(x + 4)^2$, $(x+4)(x+4)$, $(4+x)(4+x)$, $(4+x)^2$, $(x+4)^2$

Question:

The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) =$ _____

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $(x + 4)^2$.

Question 46a of 57 (2 Shifting Graphs of Quadratics 91620)

Maximum Attempts: 1

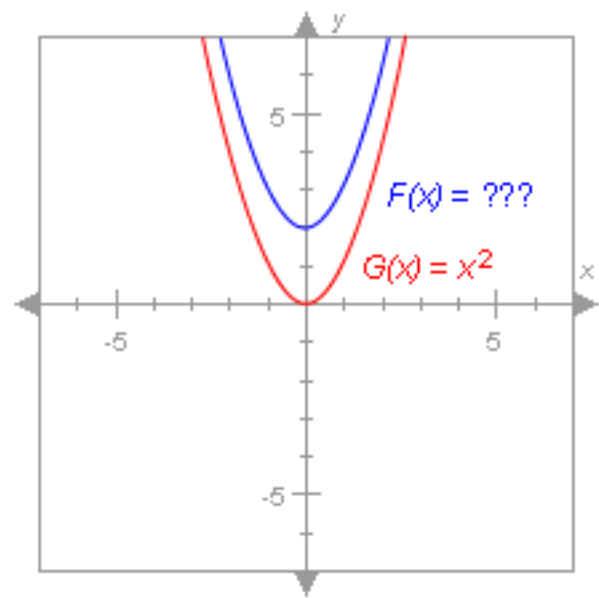
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + 2$, $(x^2 + 2)$, $2 + x^2$, $(2 + x^2)$, $(2+x^2)$, (x^2+2) , $2+x^2$, $x^2 +2$, $(x^2) + 2$, $2+(x^2)$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) =$ _____

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 + 2$.

Question 46b of 57 (2 Shifting Graphs of Quadratics 310597)

Maximum Attempts: 1

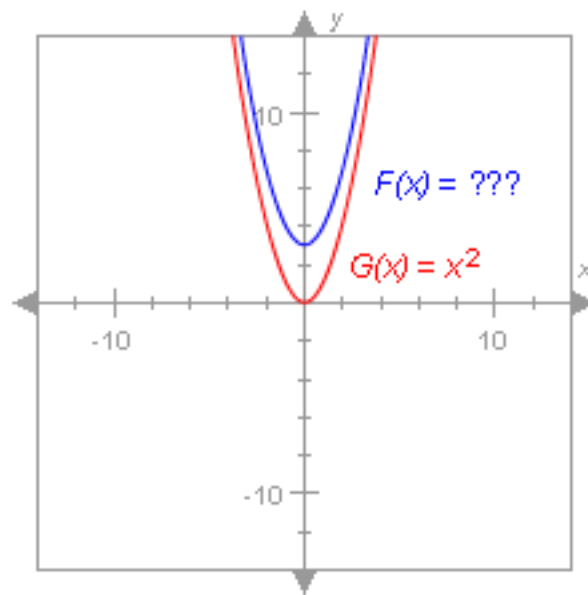
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 + 3$, $(x^2 + 3)$, $3 + x^2$, $(3 + x^2)$, $(3+x^2)$, (x^2+3) , $3+x^2$, $x^2 + 3$, $(x^2) + 3$, $3+(x^2)$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) = \underline{\hspace{2cm}}$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 + 3$.

Question 46c of 57 (2 Shifting Graphs of Quadratics 310598)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive:

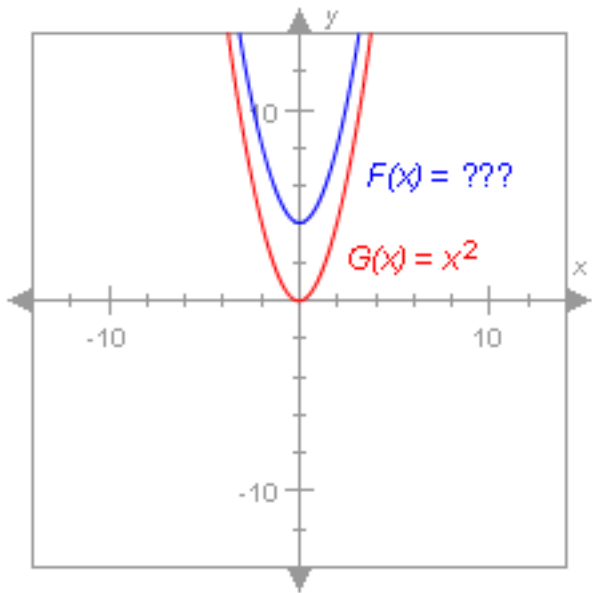
false

Correct Answer:

$x^2 + 4$, $(x^2 + 4)$, $4 + x^2$, $(4 + x^2)$, $(4+x^2)$, (x^2+4) , $4+x^2$, $x^2 +4$, $(x^2) + 4$, $4+(x^2)$

Question:

The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) =$ _____

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 + 4$.

Question 47a of 57 (2 Shifting Graphs of Quadratics 91621)

Maximum Attempts: 1

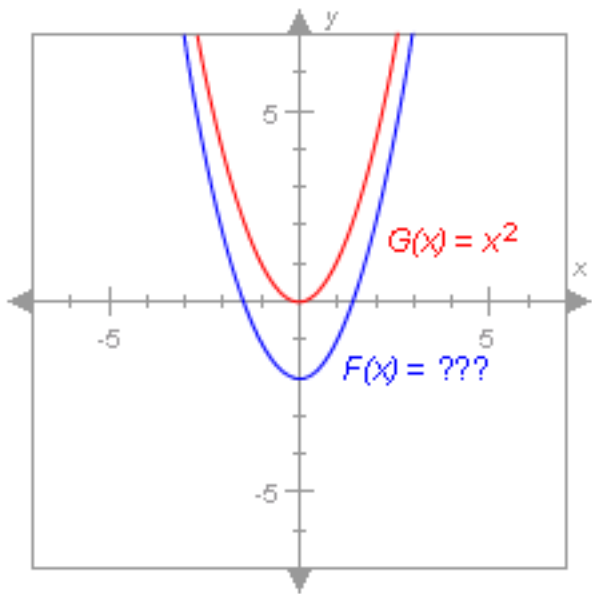
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 - 2$, $(x^2 - 2)$, $-2 + x^2$, $(-2 + x^2)$, $(x^2 - 2)$, $-2 + x^2$, $x^2 - 2$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



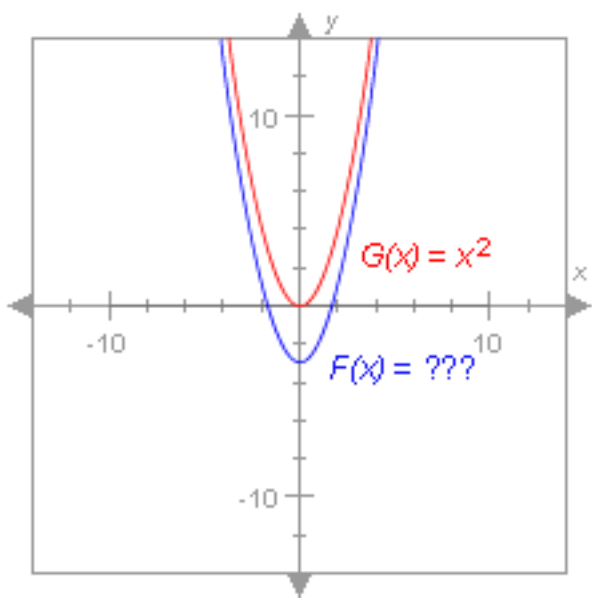
$F(x) =$ _____

Attempt	Incorrect Feedback
1st	
	Correct Feedback

	Correct Answer
	Global Incorrect Feedback
	The correct answer is: $x^2 - 2$.

Question 47b of 57 (2 Shifting Graphs of Quadratics 310599)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $x^2 - 3$, $(x^2 - 3)$, $-3 + x^2$, $(-3 + x^2)$, $(-3+x^2)$, $(x^2 -3)$, $-3+x^2$, $x^2 -3$
Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$$F(x) = \underline{\hspace{2cm}}$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $x^2 - 3$.

Question 47c of 57 (2 Shifting Graphs of Quadratics 310601)

Maximum Attempts: 1

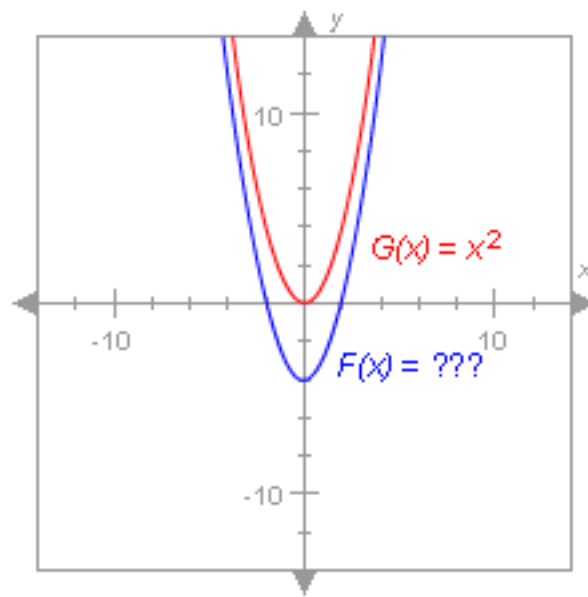
Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $x^2 - 4$, $(x^2 - 4)$, $-4 + x^2$, $(-4 + x^2)$, $(-4+x^2)$, $(x^2 -4)$, $-4+x^2$, $x^2 -4$

Question: The functions $G(x) = x^2$, graphed below in red, and $F(x)$, graphed below in blue, have the same shape. Complete the equation for $F(x)$. Use the caret (^) to enter exponents; for example, enter x^2 as x^2 . Do not include " $F(x) =$ " in your answer.



$F(x) = \underline{\hspace{2cm}}$

Attempt	Incorrect Feedback
1st	
	Correct Feedback
	Global Incorrect Feedback
	The correct answer is: $x^2 - 4$.

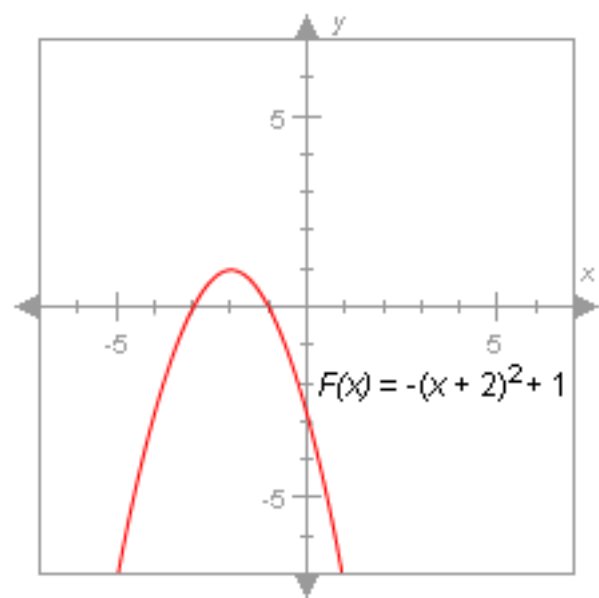
Question 48a of 57 (2 Domain and Range 91622)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the range of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$y < 1$	
B.	$-1 < y < 1$	
*C.	$y \leq 1$	
D.	All real numbers	

Global Incorrect Feedback
The correct answer is: $y \leq 1$.

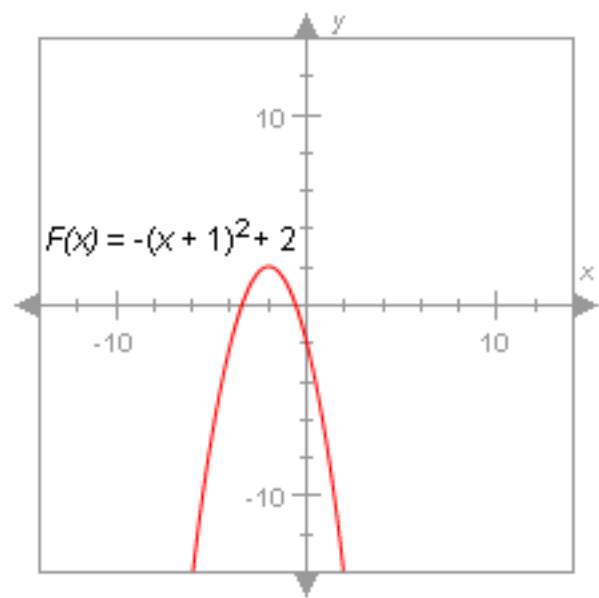
Question 48b of 57 (2 Domain and Range 310603)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score:5

Question:What is the range of the function $F(x)$ graphed below?



	Choice	Feedback
*A.	$y \leq 2$	
B.	$-2 < y < 2$	
C.	$y < 2$	
D.	All real numbers	

Global Incorrect Feedback

The correct answer is: $y \leq 2$.

Question 48c of 57 (2 Domain and Range 310604)

Maximum Attempts:1

Question Type:

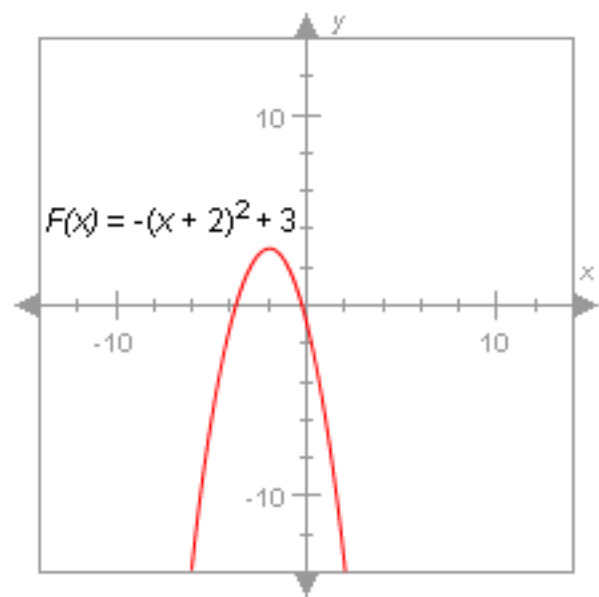
Maximum Score:

Question:

Multiple Choice

5

What is the range of the function $F(x)$ graphed below?

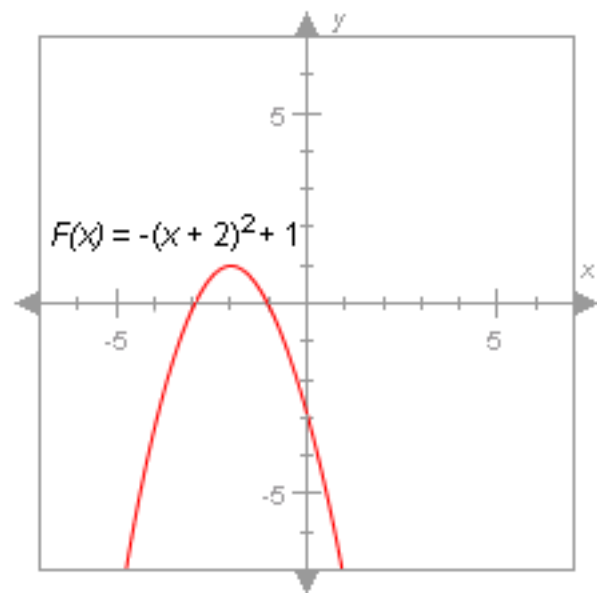


	Choice	Feedback
A.	$y < 3$	
*B.	$y \leq 3$	
C.	$-3 < y < 3$	
D.	All real numbers	

Global Incorrect Feedback

The correct answer is: $y \leq 3$.

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 5
Question: What is the domain of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$-2 < x < 1$	
B.	$x < 1$	
C.	$x \leq 1$	
*D.	All real numbers	

Global Incorrect Feedback

The correct answer is: All real numbers.

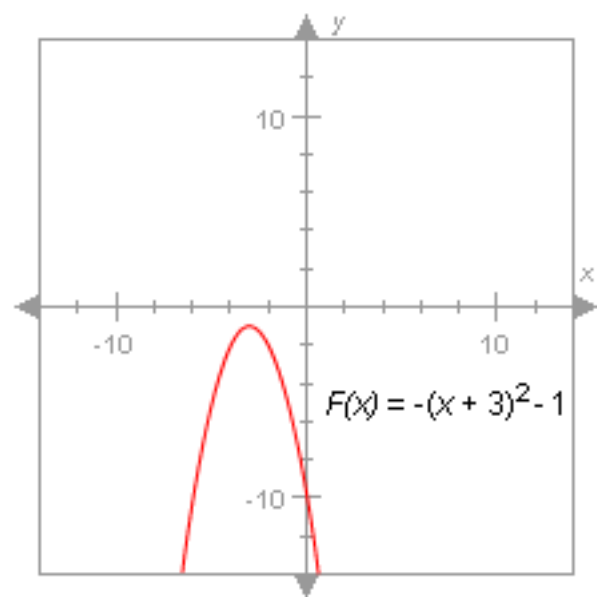
Question 49b of 57 (2 Domain and Range 310605)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$x < -1$	
B.	$-1 < x < 1$	
C.	$x \leq -1$	
*D.	All real numbers	

Global Incorrect Feedback

The correct answer is: All real numbers.

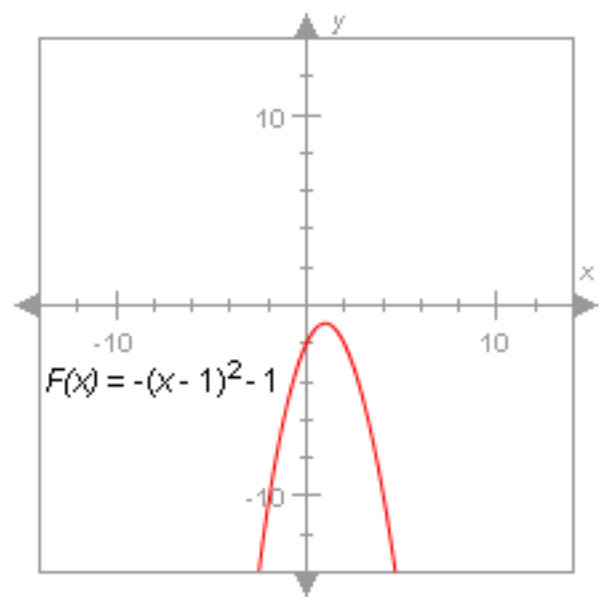
Question 49c of 57 (2 Domain and Range 310606)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$-1 < x < 1$	
B.	$x \leq 1$	
C.	$x < 1$	
*D.	All real numbers	

Global Incorrect Feedback

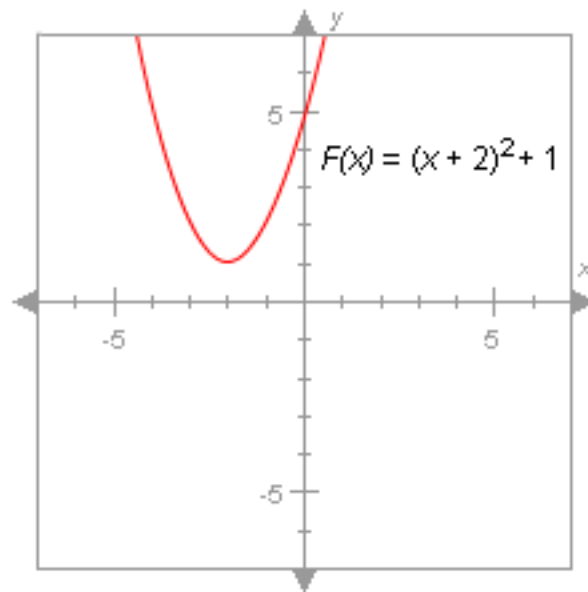
Question 50a of 57 (2 Domain and Range 91624)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the range of the function $F(x)$ graphed below?



	Choice	Feedback
*A.	$y \geq 1$	
B.	$-1 < y < 1$	
C.	$y > 1$	
D.	All real numbers	

Global Incorrect Feedback

The correct answer is: $y \geq 1$.

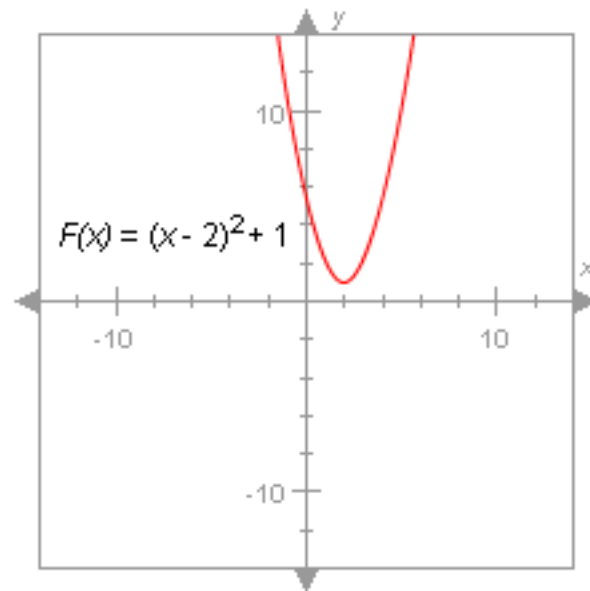
Question 50b of 57 (2 Domain and Range 310608)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the range of the function $F(x)$ graphed below?



	Choice	Feedback
*A.	$y \geq 1$	
B.	$-1 < y < 1$	
C.	$y > 1$	
D.	All real	

D.	numbers	
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Global Incorrect Feedback
The correct answer is: $y \geq 1$.

Question 50c of 57
(2 Domain and Range 310610)

Maximum Attempts:

1

Question Type:

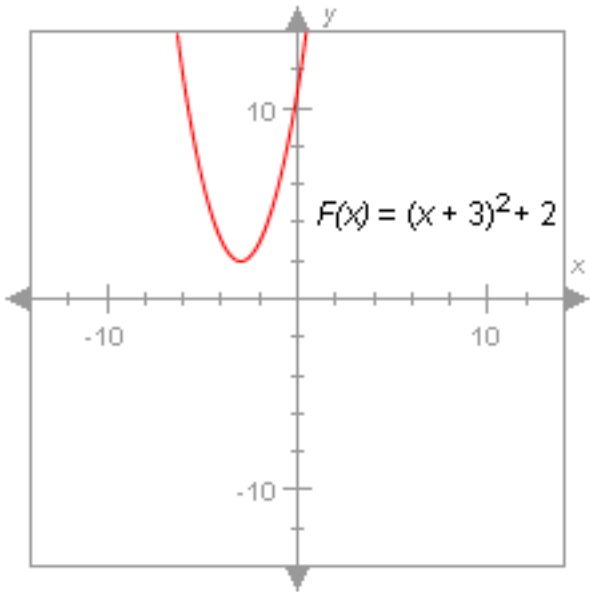
Multiple Choice

Maximum Score:

5

Question:

What is the range of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$y > 2$	
B.	$-2 < y < 2$	
*C.	$y \geq 2$	

D.	All real numbers	
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Global Incorrect Feedback
The correct answer is: $y \geq 2$.

Question 51a of 57
(2 Domain and Range 91625)

Maximum Attempts:

1

Question Type:

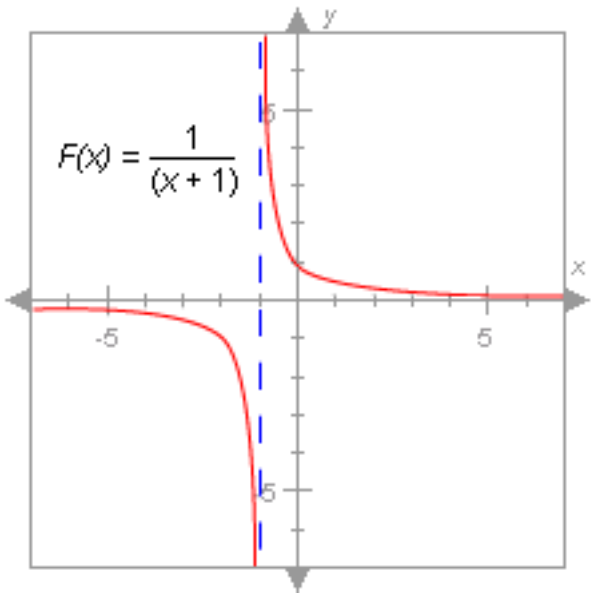
Multiple Choice

Maximum Score:

5

Question:

What is the domain of the function $F(x)$ graphed below?



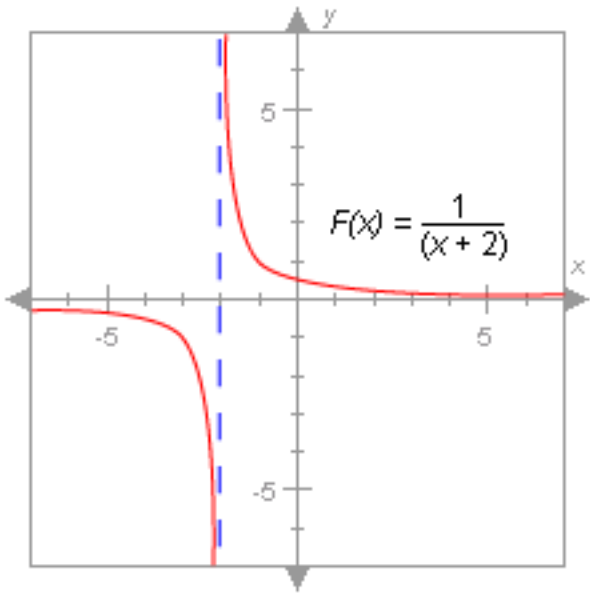
	Choice	Feedback
*A.	$x \neq -1$	
B.	$x \neq 1$	

B.	$-1 < x < 1$	
C.	$x \leq 1$	
D.	All real numbers	

Global Incorrect Feedback
The correct answer is: $x \neq -1$.

Question 51b of 57 (2 Domain and Range 310612)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 5
Question: What is the domain of the function $F(x)$ graphed below?



	Choice	Feedback

A.	$-2 < x < 2$	
B.	$x \leq 2$	
*C.	$x \neq -2$	
D.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x \neq -2$.

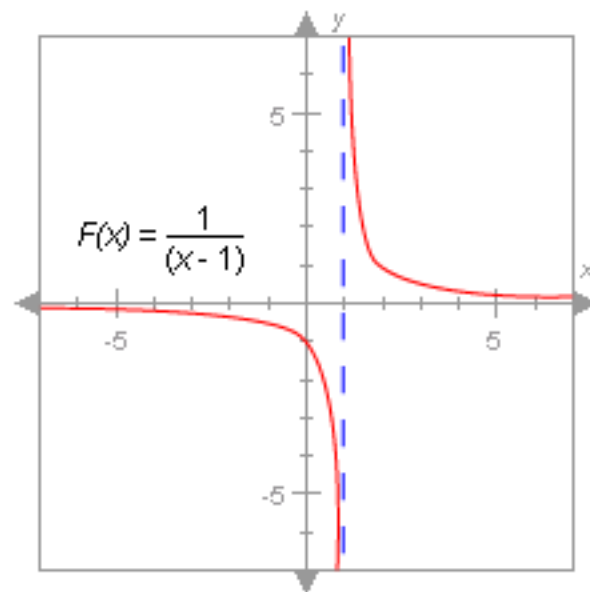
Question 51c of 57 (2 Domain and Range 310613)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: What is the domain of the function $F(x)$ graphed below?



	Choice	Feedback
A.	$x \leq 1$	
B.	$-1 < x < 1$	
*C.	$x \neq 1$	
D.	All real numbers	

Global Incorrect Feedback

The correct answer is: $x \neq 1$.

Question 52a of 57 (3 Factoring Quadratics 153685)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(3x + 5)(x - 3)$, $(3x+5)*(x-3)$, $(x-3)*(3x+5)$, $(x-3)(3x+5)$, $(3x+5)(1x-3)$, $(3x+5)*(1x-3)$, $(1x-3)*(3x+5)$, $(1x-3)(3x+5)$, $(5+3x)(-3+x)$, $(5+3x)*(-3+x)$, $(-3+x)*(5+3x)$, $(-3+x)(5+3x)$, $(5+3x)(-3+1x)$, $(5+3x)*(-3+1x)$, $(-3+1x)*(5+3x)$, $(-3+1x)(5+3x)$

Question: Factor the quadratic expression.

$$3x^2 - 4x - 15$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(3x + 5)(x - 3)$.

Question 52b of 57 (3 Factoring Quadratics 310614)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(4x + 5)(x - 4)$, $(4x+5)*(x-4)$, $(x-4)*(4x+5)$, $(x-4)(4x+5)$, $(4x+5)(1x-4)$, $(4x+5)*(1x-4)$, $(1x-4)*(4x+5)$, $(1x-4)(4x+5)$, $(5+4x)(-4+x)$, $(5+4x)*(-4+x)$, $(-4+x)*(5+4x)$, $(-4+x)(5+4x)$, $(5+4x)(-4+1x)$, $(5+4x)*(-4+1x)$, $(-4+1x)*(5+4x)$, $(-4+1x)(5+4x)$

Question: Factor the quadratic expression.

$$4x^2 - 11x - 20$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(4x + 5)(x - 4)$.

Question 52c of 57 (3 Factoring Quadratics 310615)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(3x + 5)(x - 4)$, $(3x+5)*(x-4)$, $(x-4)*(3x+5)$, $(x-4)(3x+5)$, $(3x+5)(1x-4)$, $(3x+5)*(1x-4)$, $(1x-4)*(3x+5)$, $(1x-4)(3x+5)$, $(5+3x)(-4+x)$, $(5+3x)*(-4+x)$, $(-4+x)*(5+3x)$, $(-4+x)(5+3x)$, $(5+3x)(-4+1x)$, $(5+3x)*(-4+1x)$, $(-4+1x)*(5+3x)$, $(-4+1x)(5+3x)$

Question: Factor the quadratic expression.

$$3x^2 - 7x - 20$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(3x + 5)(x - 4)$.

Question 53a of 57 (3 Factoring Quadratics 153690)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(x - 4)(x - 4)$, $(x-4)^2$, $(x - 4)^2$

Question: Factor the quadratic expression.

$$x^2 - 8x + 16$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 4)(x - 4)$.

Question 53b of 57 (3 Factoring Quadratics 310616)

Maximum Attempts: 1

Question Type: Text Fill In Blank

Maximum Score: 5

Is Case Sensitive: false

Correct Answer: $(x - 5)(x - 5)$, $(x-5)^2$, $(x - 5)^2$

Question: Factor the quadratic expression.

$$x^2 - 10x + 25$$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback

	The correct answer is: $(x - 5)(x - 5)$.
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Question 53c of 57 (3 Factoring Quadratics 310617)

Maximum Attempts: 1
Question Type: Text Fill In Blank
Maximum Score: 5
Is Case Sensitive: false
Correct Answer: $(x - 4)(x - 4)$, $(x-4)^2$, $(x - 4)^2$
Question: Factor the quadratic expression.

$$x^2 - 8x + 16$$

Attempt	Incorrect Feedback
1st	

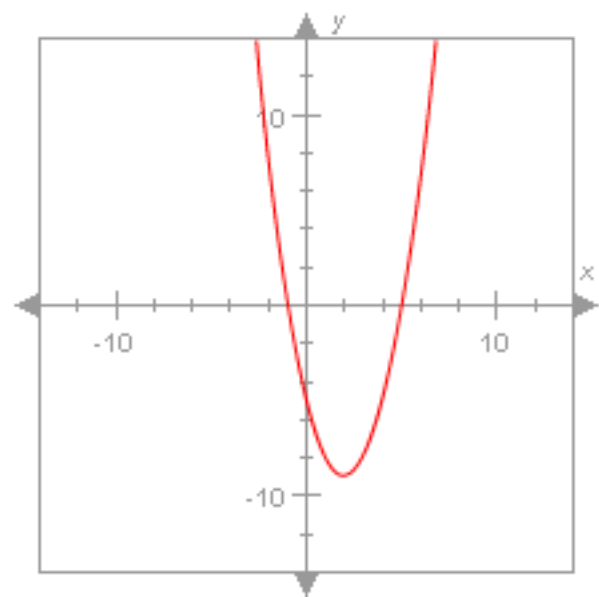
	Correct Feedback

	Global Incorrect Feedback
	The correct answer is: $(x - 4)(x - 4)$.

Question 54a of 57 (2 Graphing Quadratics 153700)

Maximum Attempts: 1
Question Type: Multiple Choice
Maximum Score: 5

Question: Which of the following functions could describe this graph?



	Choice	Feedback
A.	$y = x^2 + 5x - 1$	
*B.	$y = x^2 - 4x - 5$	
C.	$y = (x + 5)(x - 1)$	
D.	$y = -x^2 + 3x + 3$	

Global Incorrect Feedback
The correct answer is: $y = x^2 - 4x - 5$.

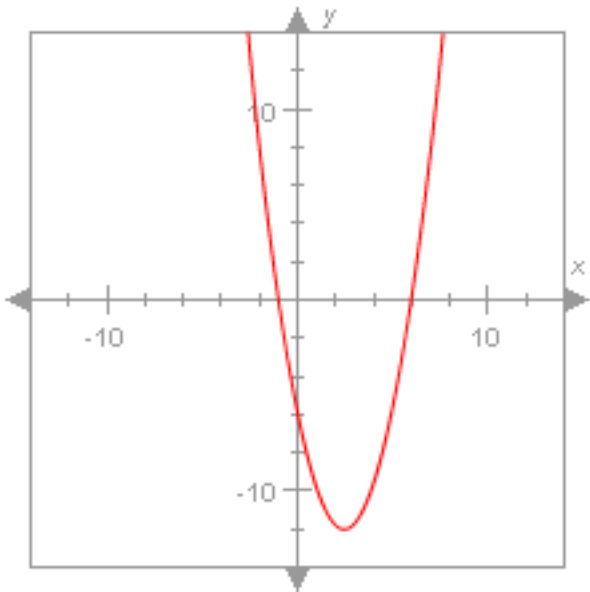
Question 54b of 57 (2 Graphing Quadratics 310619)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following functions could describe this graph?



	Choice	Feedback
A.	$y = x^2 + 6x - 1$	
B.	$y = (x + 6)(x - 2)$	
*C.	$y = x^2 - 5x - 6$	
D.	$y = -x^2 + 3x + 3$	

Global Incorrect Feedback

The correct answer is: $y = x^2 - 5x - 6$.

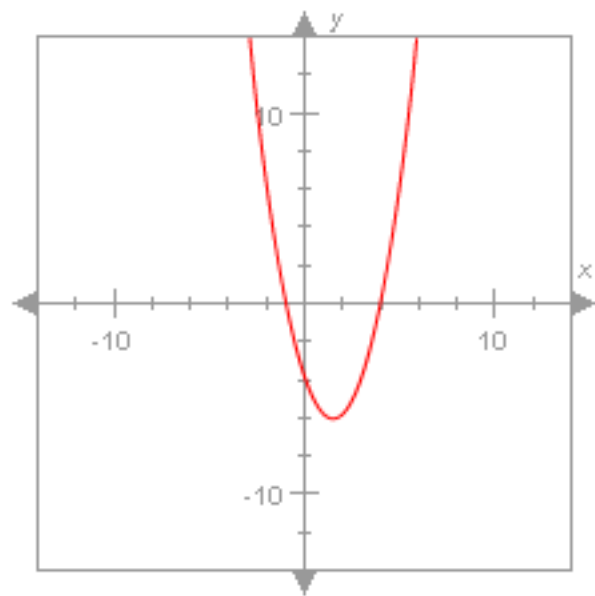
Question 54c of 57 (2 Graphing Quadratics 310620)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Which of the following functions could describe this graph?



	Choice	Feedback
A.	$y = x^2 + 4x - 1$	
B.	$y = (x + 5)(x - 1)$	

*C.	$y = x^2 - 3x - 4$	
D.	$y = -x^2 + 3x + 3$	

Global Incorrect Feedback

The correct answer is: $y = x^2 - 3x - 4$.

Question 55a of 57 (3 Solving Quadratics 153704)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following are solutions to the quadratic equation? Check all that apply.

$$x^2 + 8x - 7 = -13 + 2x$$

Correct Answers:

	Choice
A.	-3
*B.	$-3 + \sqrt{3}$
C.	$3 - \sqrt{-3}$
D.	3
*E.	$-3 - \sqrt{3}$
F.	$3 + \sqrt{-3}$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: $-3 + \sqrt{3}$ and $-3 - \sqrt{3}$.

Question 55b of 57 (3 Solving Quadratics 310621)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following are solutions to the quadratic equation below? Check all that apply.

$$x^2 + 10x + 1 = -12 + 2x$$

Correct Answers:

	Choice
A.	-4
*B.	$-4 + \sqrt{3}$
C.	$4 - \sqrt{-3}$
D.	4
*E.	$-4 - \sqrt{3}$

F.	$4 + \sqrt{-3}$
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Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: $-4 + \sqrt{3}$ and $-4 - \sqrt{3}$.

Question 55c of 57 (3 Solving Quadratics 310622)

Maximum Attempts: 1

Question Type: Multiple Response

Maximum Score: 5

Question: Which of the following are solutions to the quadratic equation below? Check all that apply.

$$x^2 + 6x - 7 = -8 + 2x$$

Correct Answers:

	Choice
A.	-2
*B.	$-2 + \sqrt{3}$
C.	$2 - \sqrt{-3}$
D.	2

*E.	$-2 - \sqrt{3}$
F.	$2 + \sqrt{-3}$

Attempt	Incorrect Feedback
1st	

	Correct Feedback

	Global Incorrect Feedback
	The correct answers are: $-2 + \sqrt{3}$ and $-2 - \sqrt{3}$.

Question 56a of 57 (3 The Quadratic Formula 153710)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Solve for x by using the quadratic formula.

$$5x^2 - 7x - 5 = 0$$

	Choice	Feedback
A.	$\frac{5 \pm \sqrt{-51}}{10}$	
B.	$\frac{19}{10}, -\frac{1}{2}$	

*C.	$\frac{7 \pm \sqrt{149}}{10}$	
D.	$\frac{-7 \pm \sqrt{-51}}{10}$	

Global Incorrect Feedback

The correct answer is: $\frac{7 \pm \sqrt{149}}{10}$.

Question 56b of 57 (3 The Quadratic Formula 310623)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Solve for x by using the quadratic formula.

$$6x^2 - 8x - 3 = 0$$

	Choice	Feedback
A.	$\frac{8 \pm \sqrt{-8}}{12}$	
B.	$\frac{6 \pm \sqrt{-8}}{12}$	
*C.	$\frac{4 \pm \sqrt{34}}{6}$	
D.	$\frac{17}{12}, -\frac{1}{2}$	

Global Incorrect Feedback

The correct answer is: $\frac{4 \pm \sqrt{34}}{6}$.

Question 56c of 57 (3 The Quadratic Formula 310625)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Solve for x by using the quadratic formula.

$$4x^2 - 6x - 6 = 0$$

	Choice	Feedback
A.	$\frac{4 \pm \sqrt{-60}}{8}$	
B.	$\frac{17}{8}, -\frac{1}{2}$	
*C.	$\frac{3 \pm \sqrt{33}}{4}$	
D.	$\frac{6 \pm \sqrt{-60}}{8}$	

Global Incorrect Feedback

The correct answer is: $\frac{3 \pm \sqrt{33}}{4}$.

Question 57a of 57 (3 Using the Discriminant 153732)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Given the function below, what is the value of the discriminant, and how many times does the graph of this function intersect or touch the x-axis?

$$F(x) = 3x^2 + 6x - 5$$

	Choice	Feedback
A.	Discriminant = 24; Graph crosses the x-axis two times.	
B.	Discriminant = -24; Graph doesn't cross the x-axis.	
C.	Discriminant = 0; Graph touches the x-axis one time.	
*D.	Discriminant = 96; Graph crosses the x-axis two times.	

Global Incorrect Feedback

The correct answer is: Discriminant = 96; Graph crosses the x-axis two times.

Question 57b of 57 (3 Using the Discriminant 310628)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Given the function below, what is the value of the discriminant, and how many times does the graph of this function intersect or touch the x-axis?

$$F(x) = 4x^2 + 6x - 5$$

	Choice	Feedback
A.	Discriminant = 18; Graph crosses the x-axis two times.	
B.	Discriminant = -18; Graph doesn't cross the x-axis.	
C.	Discriminant = 0; Graph touches the x-axis one time.	
*D.	Discriminant = 116; Graph crosses the x-axis two times.	

Global Incorrect Feedback

The correct answer is: Discriminant = 116;
Graph crosses the x-axis two times.

Question 57c of 57 (3 Using the Discriminant 310629)

Maximum Attempts: 1

Question Type: Multiple Choice

Maximum Score: 5

Question: Given the function below, what is the value of the discriminant, and how many times does the graph of this function intersect or touch the x-axis?

$$F(x) = 6x^2 + 5x - 3$$

	Choice	Feedback
A.	Discriminant = 14; Graph crosses the x-axis two times.	
B.	Discriminant = -14; Graph doesn't cross the x-axis.	
C.	Discriminant = 0; Graph touches the x-axis one time.	
*D.	Discriminant = 97; Graph crosses the x-axis two times.	

Global Incorrect Feedback

The correct answer is: Discriminant = 97; Graph crosses the x-axis two times.